

Figure 1

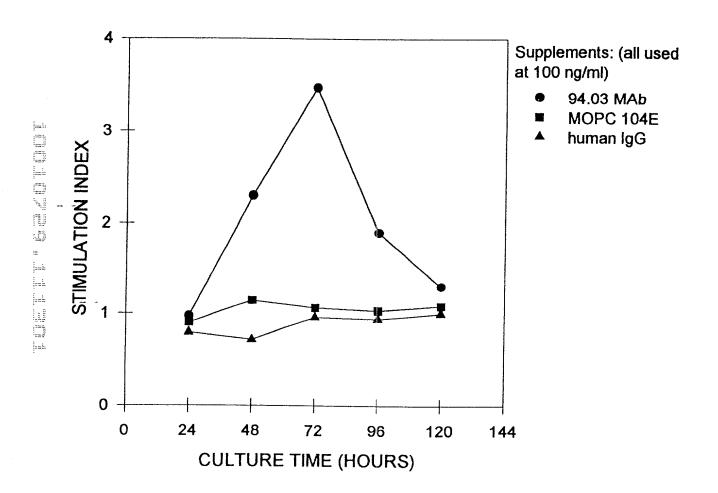


Figure 2

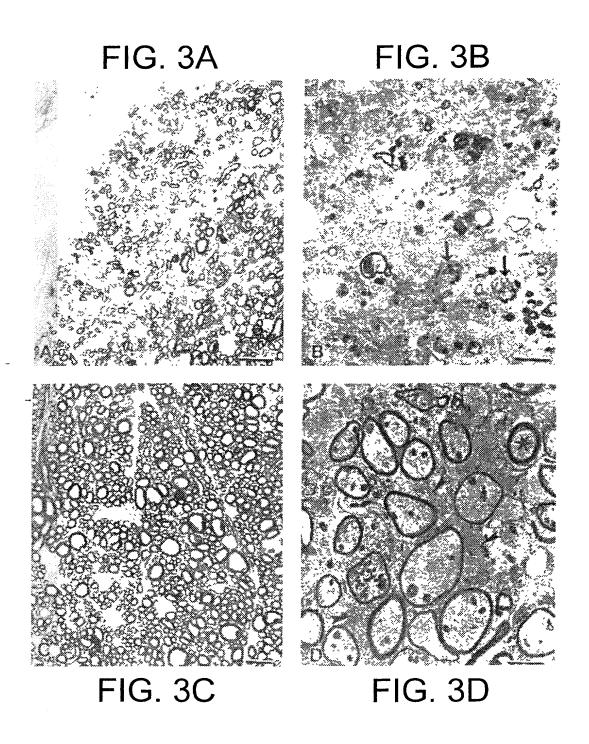


Figure 3

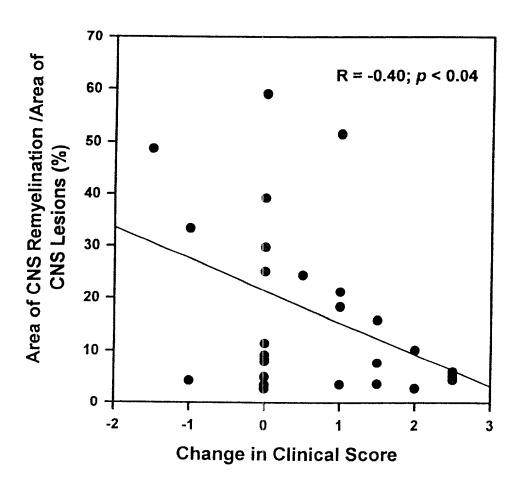


Figure 4

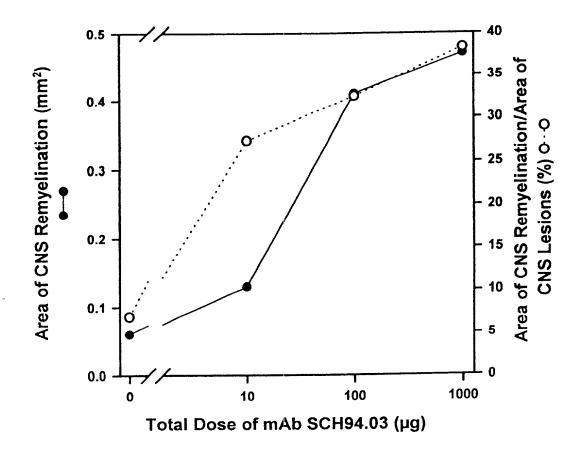


Figure 5

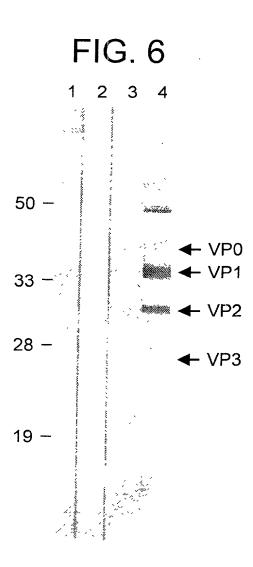


Figure 6

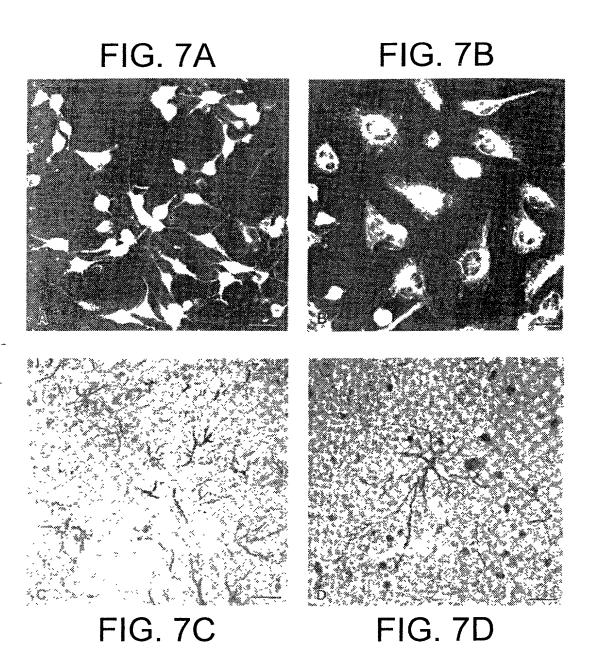
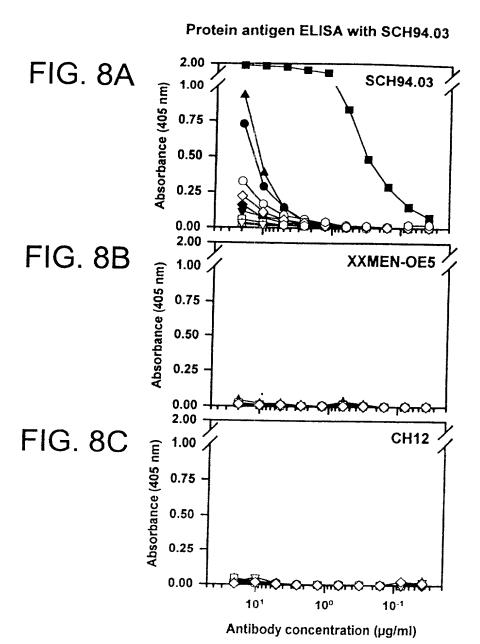


Figure 7



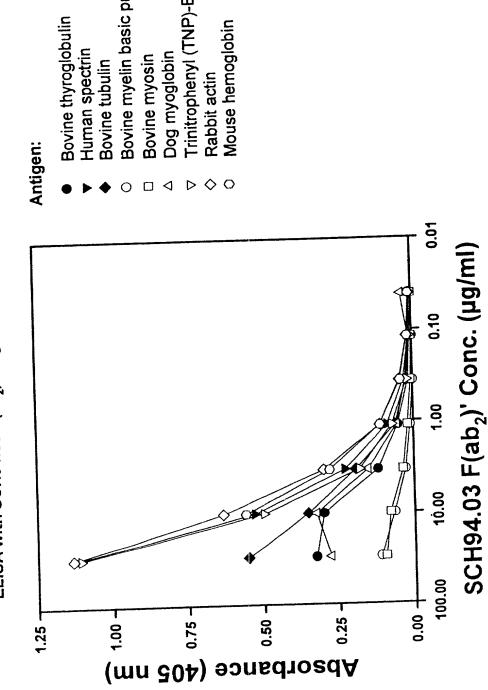
Antigen:

KLH
 spectrin
 hemoglobin
 vimentin
 thyroglobulin
 actin
 lysozyme
 transferrin
 myosin
 tubulin

Figure 8

(Sheet 9 of 87)

ELISA with SCH94.03 F(ab₂)' fragments



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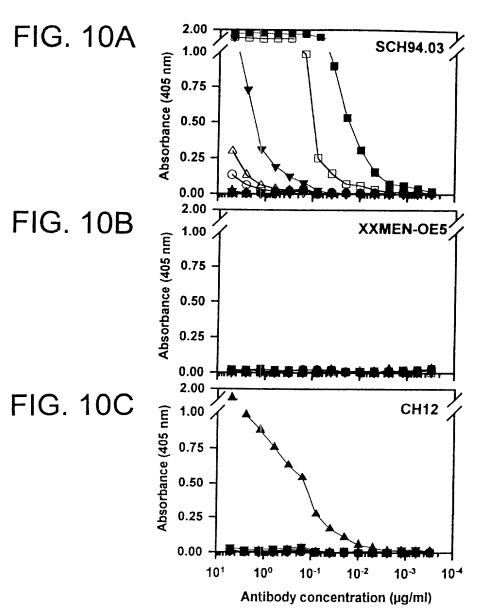
Bovine myelin basic protein

Bovine myosin Dog myoglobin Trinitrophenyl (TNP)-BSA

Rabbit actin Mouse hemoglobin

Figure 9

Chemical hapten ELISA with SCH94.03



Hapten:

none
 FL
 TMA

PhOx

Figure 10

URBLET

 ∇

Ars NP

TNP

PC

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Immunoglobulin Light Chain Variable Region Sequence of SCH94.03

	M T Q T ATG ACA CAG ACT	N Y L N AAT TAT TTA AAC	60 K S R GTC CCA TCA AGG	T Y F G ACT TAC TTT TGC		
	O S C S	S Q D I S AGT CAG GAC ATT AGC	R L H S G AGA TTA CAC TCA GGA	80	ğ	110
	L C F Q G T	20 R A A ACC ATC AGG GCA	T I X T S CTG ATC TAC TAC ACA TCA	T I S N L E ACC ATT ACC AAC CTG GAG	J region	G T K L B I GGC ACC AAG CTG GAA ATC
Leader region	L G L L L CTT GGT CTC CTG TTG	L G D R V CTG GGA GAC AGA GTC	G T V K L GGA ACT GTT AAA CTC	70 Y S L ACA GAT TAT TCT CTC		100 W T F G G TGG ACG TTC GGT GGA P CC
	H M S S A Q F ATG ATG TCC TCT GCT CAG TTC	T S L S A S ACA TCC TCC CTG TCT GCC TCT	TGG TAT CAG CAG AAA CCA GAT	F S G S G S G S G TTC AGT GGC AGT GGG TCT GGA	CDR3	90
	SCH94.03 PCH12 germline VK10	3CH94.03 CH12 germline Vk10	SCH94.03 CH12 germline Vk10	SCH94.03 CH12 germline Vc10	·	SCH94.03 CH12 germline Vk10

Figure 11A

Immunoglobulin Heavy Chain Variable Region Sequence of SCH94.03

Figure 11B

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	e CCT	v GTG		¥¥ ₩	!	s c	<u> </u>		gion	AGT		
	g GGA	¥ Tog		175 T	-	ر د کار			C region	GAG A		
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	SA :	CDR1				ZAA		E GAG A			>	E O
	CTG	, TAC		7.4 &		ू गुर्			h	61.1		
	CAG	S AGC		¥ ¥		ACT 7			>	() 1		
	> #	30 ACA				T ACT		82C CTG /			H	V
	7 0 g	F TTC	CDR2	s AGT ,		S S S			1	V CC V		
	130	ACC		GGT /		82A 1			0	 999		
	# \\ \	Y TAC			D GAT (82 8 L CTC A			<	6CA G	
	> 25	G GGT		GGA C		CAG C		Jegion	0	5 299		
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	₹	A GCT		52 Y TAT TAC		>	GTC T					
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	g GGA	ე <u>ნ</u>			8 ≯ £ ¦	!	₽ \			100B F	TTC 0	
	ν <u>Σ</u> ;	S TCC		GGGA GGA AGC ,			100A 1 Y	TAC 1				
	CTG	20 I ATA		ATT		S TCC ,	ຄ		8 ₹	TGG 1		
tide	J D I	K		¥ T0G		S TCC	CDR3		> -	TAC		
Leader Peptide	7.7	v GTG		E GAG			ir,					
1	⊒E!	7 E		TL :		D GAC	į		~	AGG_TTC		
	EE!	A GCT		GGA		₹			<) 226		
	ATC	999		05		T ACT			5	999		
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	AGA	AAG		CCT		ACA :			~ 5	;		
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I	M ATG	10 E GAG		¥¥g ;	<u>6</u>	980		8	Y Y	1 1		
	A1/A4 01	A1/A4 01		A1/A4 O1		A1/A4 01			A1/A4 sermline 3H1	10		

Figure 12

(Sheet 14 of 87)

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GGA ACC TCA

TGG GGT CAA

TAC TAT GCT ATG GAC TAC

N R G R Y N
AAT AGG GGT AGG TAC AAT ---CDR3

D C G S R G C --- --- GAC_TAC_GGT AGT_AGG GGG

HNK:1

G CAG CTG AAG CAG TCA G D T GAC ACA > **Q** | | | ₹ GGT | | | **ა**გ¦¦¦ 8z¥ | | | AAT C TAT AGC Y TAT S 17CT G--- G--- G--- G---> B ! ! ! GAC 30 ACT 08 | ° | 708111 ACA | | | 7E | | | 82C 1 | | | Jregion s 100 ा । दुर AGC S AGT 82A AAC # 5 ! ! ! GGA GGA G GGT GGT 82 M ATG S 177 s AGT S I T C T V S T C T T C T T C T T C T T C T T C T T C S AGC 8 r F 50 V I GTG ATA F 11 100A 100B 100C 100D Y Y A M K S Q V
AAG AGC CAA GTT T ACA | | GGA CTA GTG / CTG SOS E W GAG TGG 8 Leader Peptide CTG ინ | CAG AGC CTG F AAG GGT S TCA £8;;; GGA GGA 00 | ; ; 48 | | | - P | | | Y C A R TAC TGT GCC AGA > 5 ! ! ! S AGC AGA CTG og ¦ ; ; 6. ⊼A 1 1 1 ≈ 00 | | | germline VH101 O4 HNK-1 D23 germline VH101 germline JH4

Figure 13

(Sheet 15 of 87)

G G G GGA GGA GGA S TCT > 25 -82B 82C A L R A E D T GCC CTG AGA GCT GAG GAC ACT ACT E W GAG TGG ٠ کا : GTC : V E S GTG GAA TCT S AGT 60 Y E Y C C ACA ACA GAG TAC A Y M TAC ATG GGG ACT OR! 1 Q C B V K L
ATC CAG TGT GAG GTG AAG CTG F TTC DGAT 200 30 S AGT Y AAT AAT TAC TGG DGAT L R L S C A T S G F T F CTG AGA CTC TCC TGT GCA ACT TCT GGG TTC ACC TTC R D T S Q S I L Y L Q M AGA GAC ACT TCC CAA AGC ATC CTC TAC CTT CAG ATG z ¥ ¦ <u>ا روا</u> 52A 52B 52C N K A AAC AAA GCT A 100C F E GCC TGG F L L T L L H G ITT CAT GGT GAT GCA CGG CAG CTC GGG CTC CCG 52 AGA 100B P SO A S GCA AGT 100A CDR3 <u>8</u> 0 GCT E W I GAG TGG ATT 0 Leader Peptide A I Y Y C A R D A R GCC ATT TAT TAC TOT GCA AGA GAT GCA C 5 8 7 17CC Q P P G K R L
CAG CCT CCA GGG AAG AGA CTG > GTC R F I CGG TTC ATC C K G AAG GGT (CDR2 ∢ঠ ¦ V S GTC TCT (Jregoo 10 GGC ₩ CGC > 010 germline JH3 A2B5 germline V1 A2B5 germline VI A2B5 germline V1 A2B5 germline V1 germline JH3 A2B5 germline V1 A2B5

Figure 14

(Sheet 16 of 87)

Leader Pepude	T L V F I S NOT CTG GTC TTC ATA TCC	M S V G E R ATO TCA GTA GGA GAG AGG	E Q S P K L Add CAG TCT CCT AAA CTG	T D F T L T C ACC CG ACC		J region	T F G G G G ACC (CG TTC GGA GGG GGG ACC
	-19 E S Q T L GAA TCA CAG ACT CTG	S M S M S TCC ATG TCC ATG TCA	Q K P E Q CAG AAA CCA GAG CAG	G S A T D GGA TCT GCA ACA GAT	CDR3	**************************************	Y P Y T F TAT CCG TAC ACG TTC TAC ACG TTC
	.19 N E S Q T ATG GAA TCA CAG AC	M S ATG TCC	40 K P AAA CCA	S A TCT GCA	CDR3		P Y CCG TAC TAC

Figure 15

(Sheet 17 of 87)

Leader Peptide

CAG		N V		H H	2 808				
ACC C		1 A A T T		AGG T	CTA CA				
M A TA		S I AGC T		8×4	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
CAG A		S S AGT A		* V	7 Y TAC TX				
ATC C		30 GGT A		V F GTC CC	Y Y TAT TAT				
D D I	CDR.1	ATT G		GGT G	D Y GAC TA				
C 151	Ū	D I GAC A'		S C TCT GG	V D GTA G				∢ !
AGA TO		CAG G				,			T TCA
1				D A GAT	H TTT	Ċ	֚֚֚֚֭֭֓֞֝֟֝֟֝֟֝		T GCT
T ACC		S A AGT	CDR2	T TTA	D A GAT				T GAT
4 0 4		G GCA	8	S AGT	E GAA		۱,		3 GCT
0 \$	ļ	CGG		\$ 1 TCC	80 S S TCT			~	550 1
FF :		C TGT		ACA	E GAG			% ≥	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
1 5 T		ACT		86 4	J E			<u>§</u>	A ATA
L CTC		T CTC		Y TAC	S AGC			m	GAA
J TTG		20 S S AGT		3 A B	S AGC			_	CTG
J C		> 010 Y		L CTG	ATC	Ş		×	AAG
- E		A AGA		× 0	T ACC	region !		۲	ACC
9 9		⊞ GAA		× \ \ \ \ \ \	1 OF			Ö	999
#E!!		g GGA		ATTA	S TCT		5	≧	 099
TTA		CTG		ACT ACT	Y TAT			Ö	GGA
CAG		S TCT		GGA GGA	70 D GAT			Ľ.	E !
A GCA		∀ 000		D GAT	S TCA			۲	ACG
۳ ۲		STCT		CCA CCA	9 000			> -	TAC
GCT A		J TT		E GAA	s TGT			م ۾	
A GG		S TCC		CAG	AGG	CDR3		s TCT	
M A TG		s 7		CAG	S AGT			s AGT	
D GAC		8		→ £ ! !	9 9			~ 5	
M ATG		S TCT		¥ T06	S AGT			Y TAT	!!
germline Vrk41 HNK-1 MOPC41		germline Vk41 HNK-1 MOPC41		geraline Vx41 HNK.1 MOPC41	gernline Vr41 HNK-1 MOPC41			gernline Vx41	geraline Jv2 HNK-1 MOPC41

Figure 16

(Sheet 18 of 87)

60 B F T G
D R F T G
CGC TTC ACT GGC
CDR3 Y TAT Y TAT F T F T I S S V Q A E D L A V Y Y C Q Q H TIC ACC ATC AGC AGT GTG CAG GCT GAA GAC CTG GCA GTT TAT TAC TGT CAG CAA CAT P K L L I Y S A S Y R Y T G V P CCT AAA CTA CTG ATT TAC TCG GCA TCC TAC CGG TAC ACT GGA GTC CCT K R AAA CGG GCT GAT GCT TCA GG ACC AAG CTG GAG CTG V F GTA TTC (8 **₹** 5 ; M E S Q 1 Q V F ATG GAG TCA CAG ATT CAG GTC TTT Q Q K P G Q S
CAA CAG AAA CCA GGA CAA TCT GGT ACG TTC ACT ACT CCG S G AGT GGA germline 3v5 A2B5 A2B5 A2B5 A2B5 A2B5

⊭S Z

Figure 17

FIG. 18

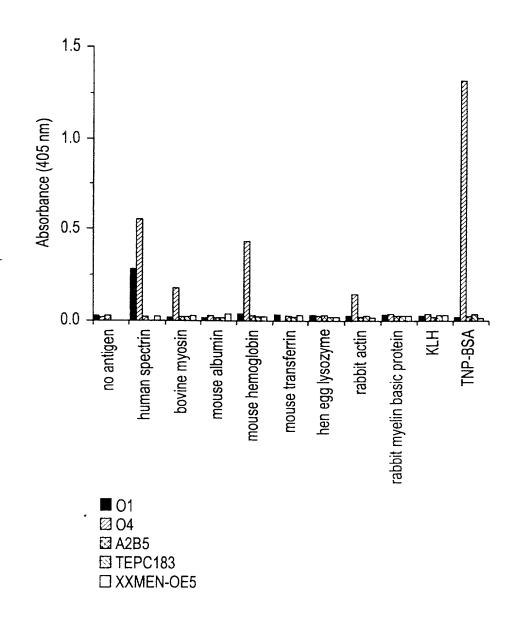


Figure 18

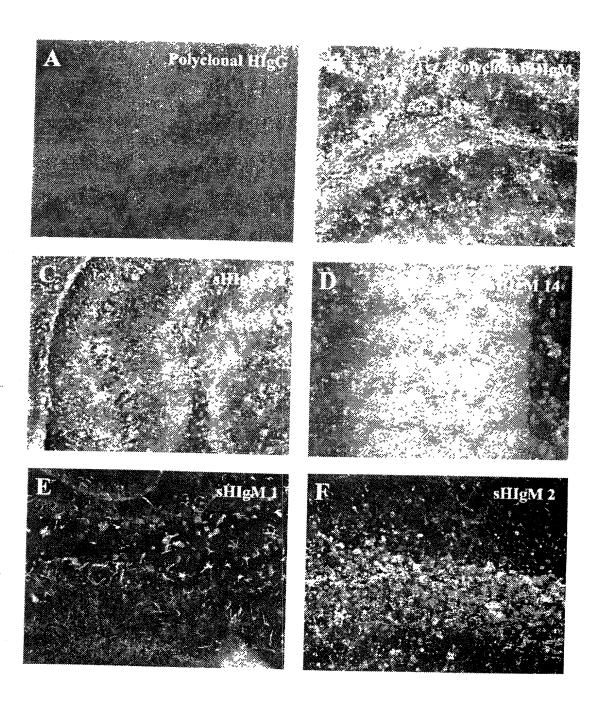


Figure 19

817.13

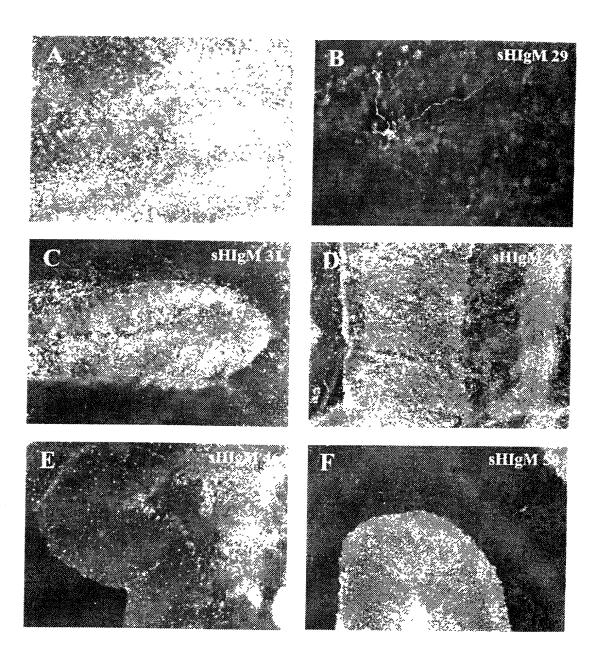


Figure 20

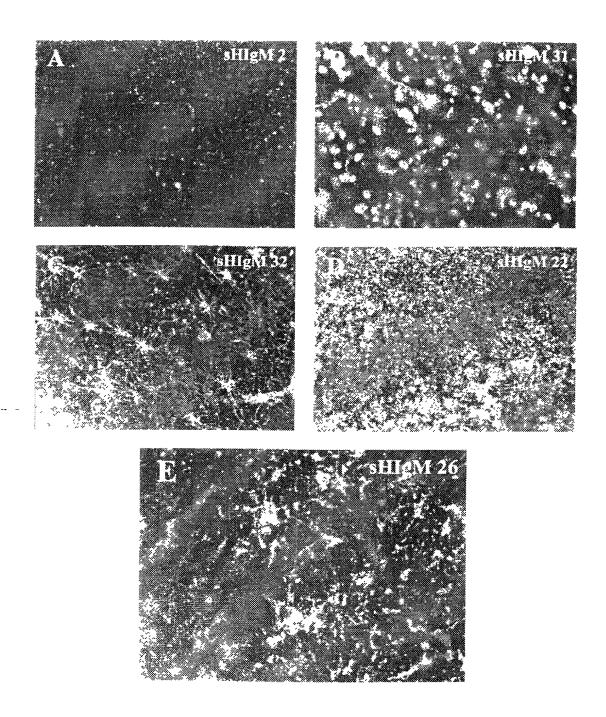


Figure 21

or to anything

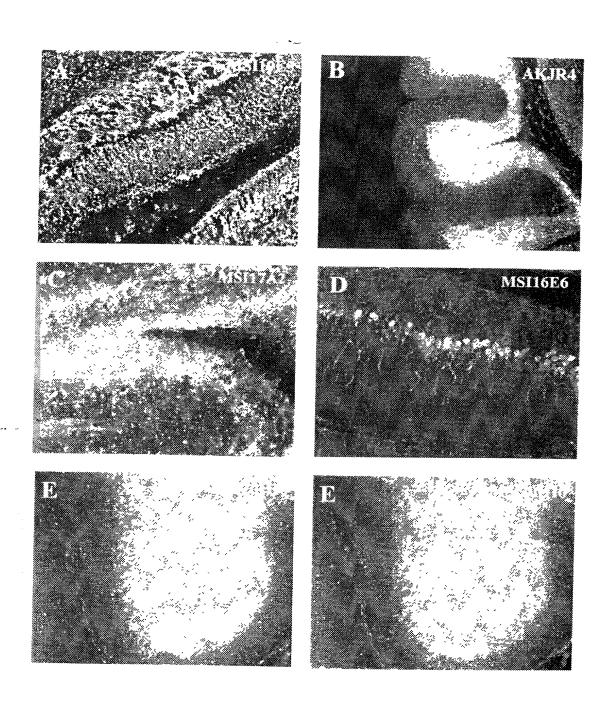


Figure 22

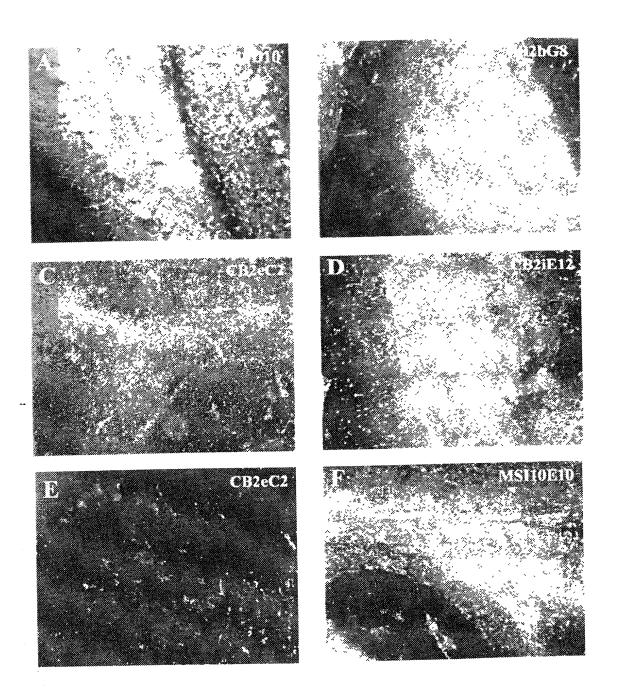


Figure 23

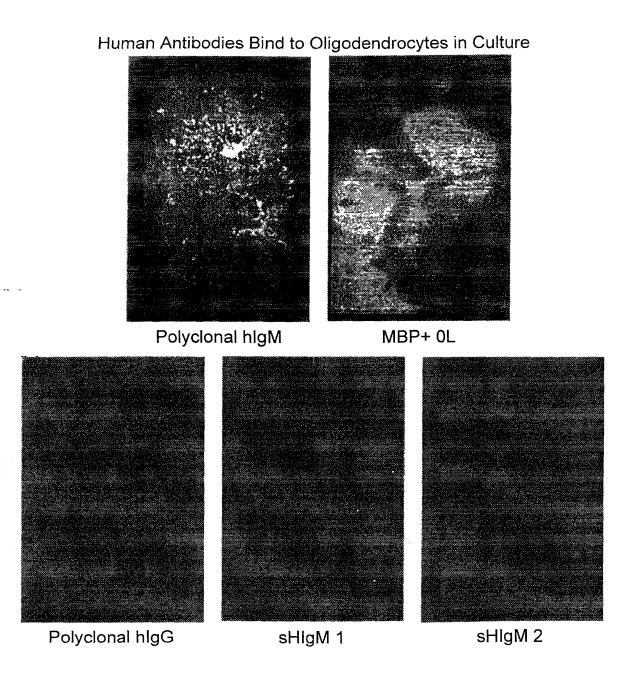


Figure 24

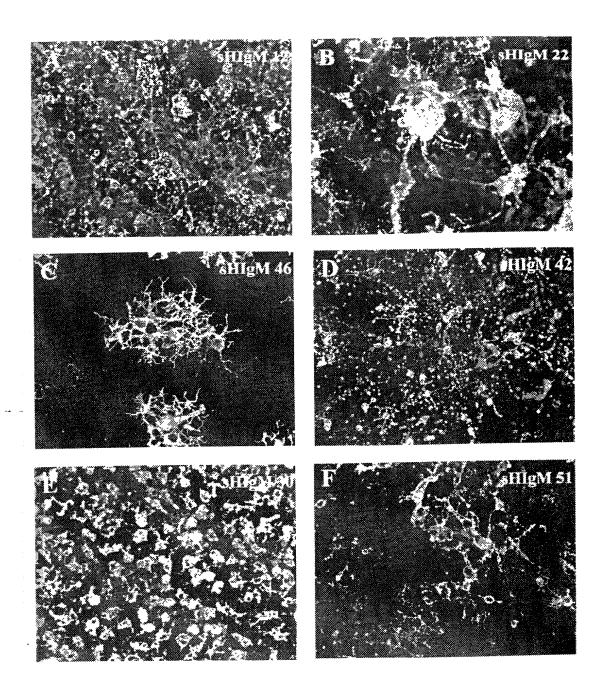


Figure 25

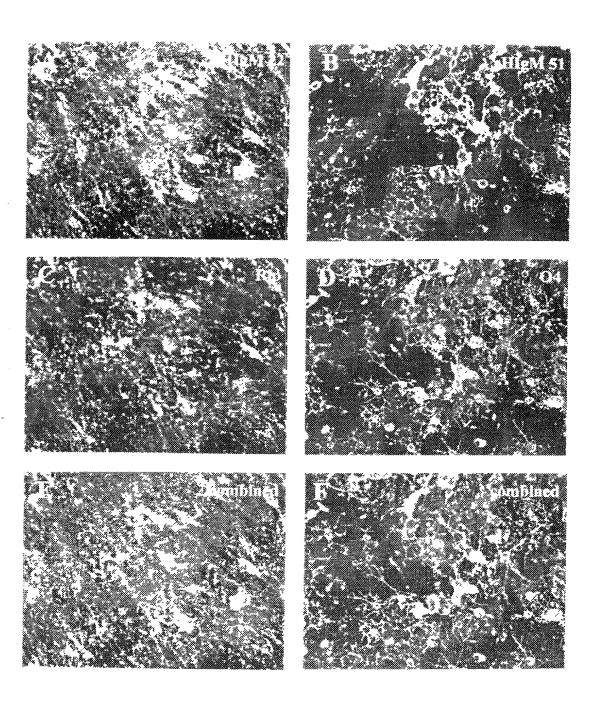


Figure 26

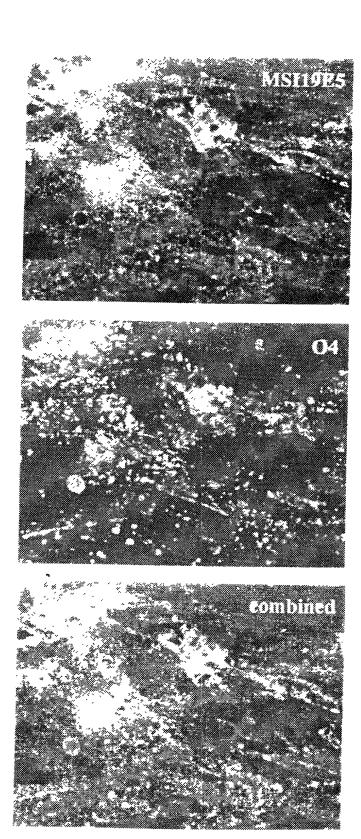


Figure 27

sHIgMs Characterized by Binding to SCH via ELISA

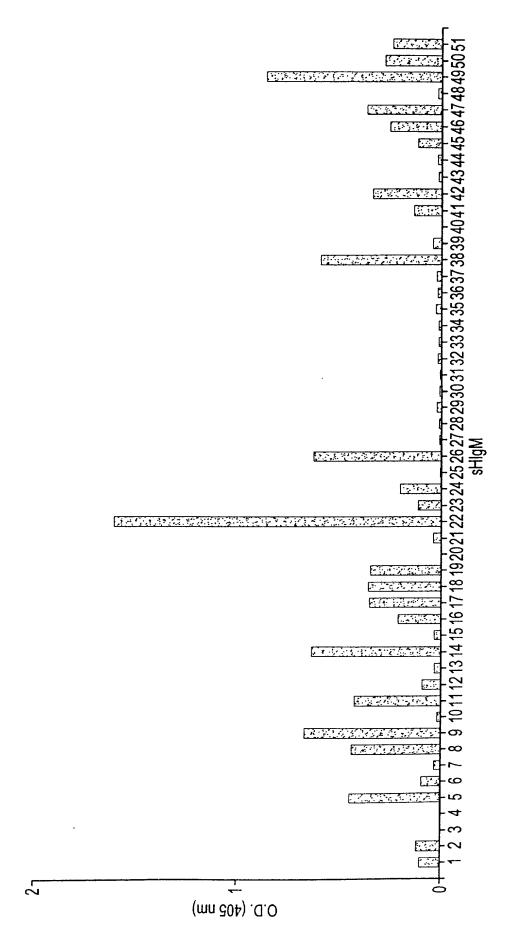


Figure 28

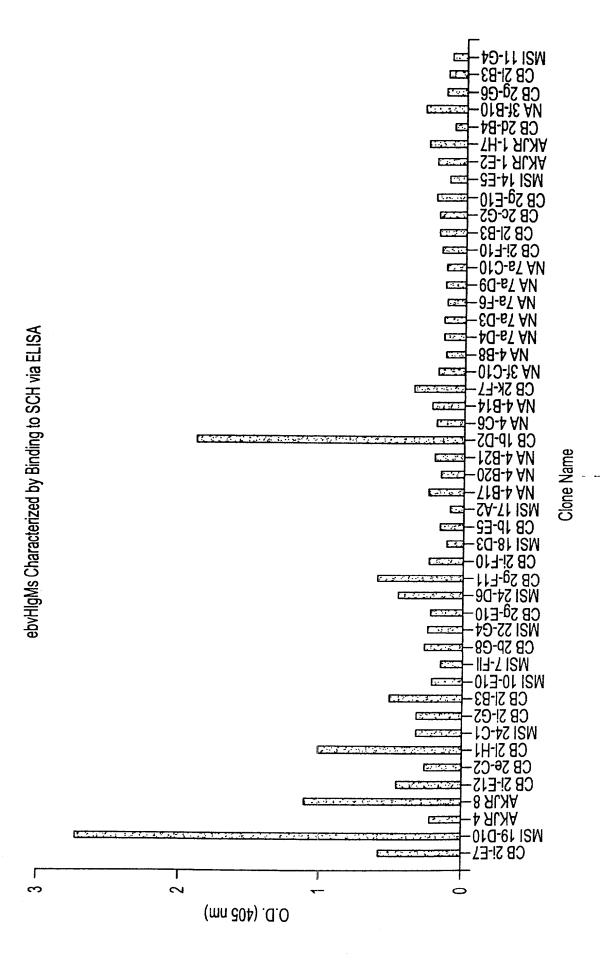


Figure 29

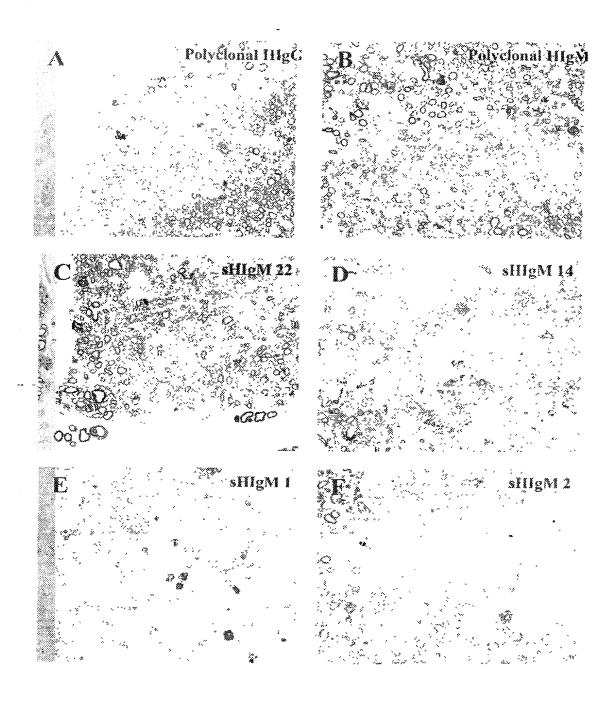


Figure 30

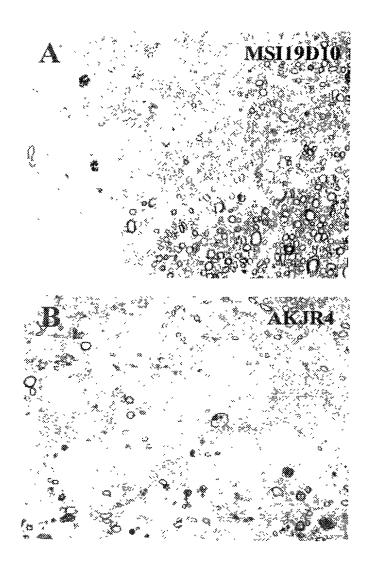


Figure 31

TELE LIN

Lysolecithin Experiment 21 Day Experiment

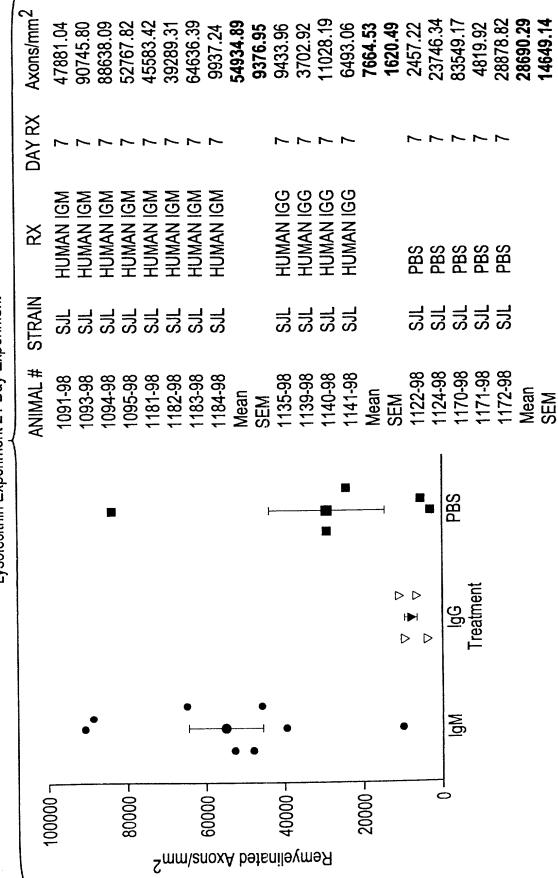


Figure 32

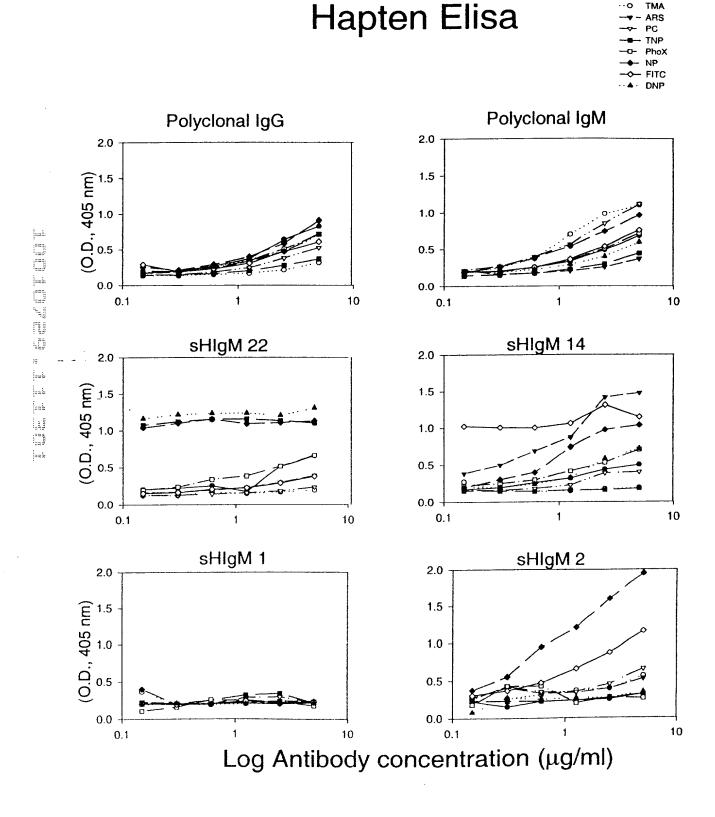


Figure 33

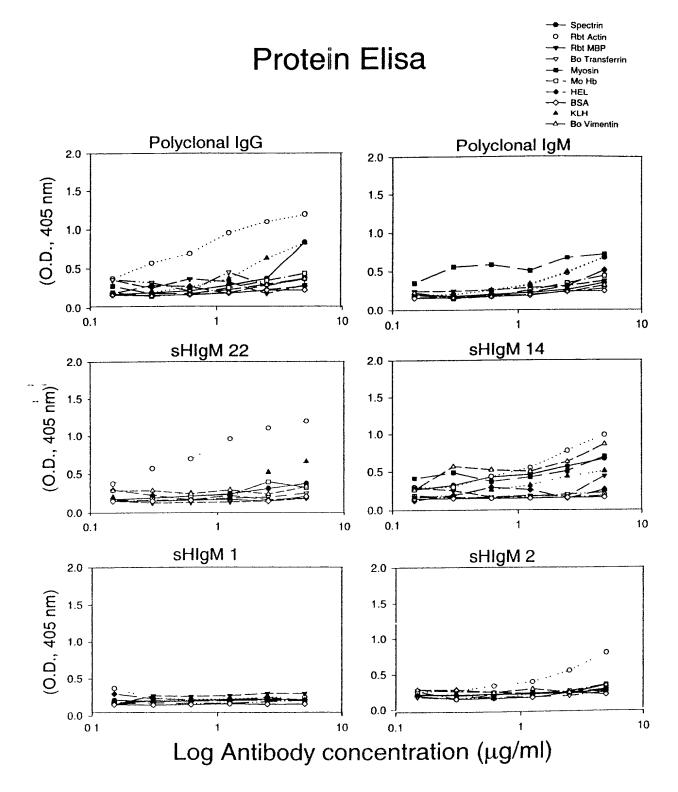


Figure 34

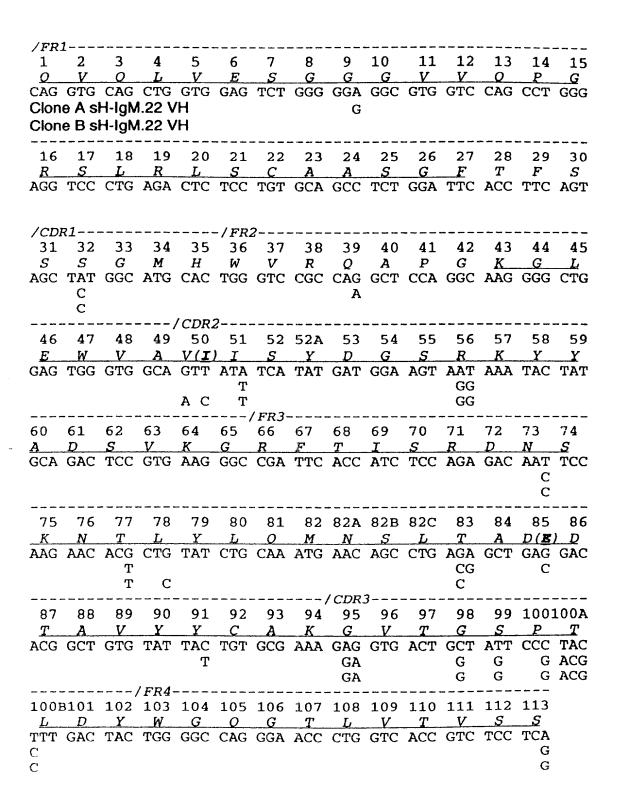


Figure 35

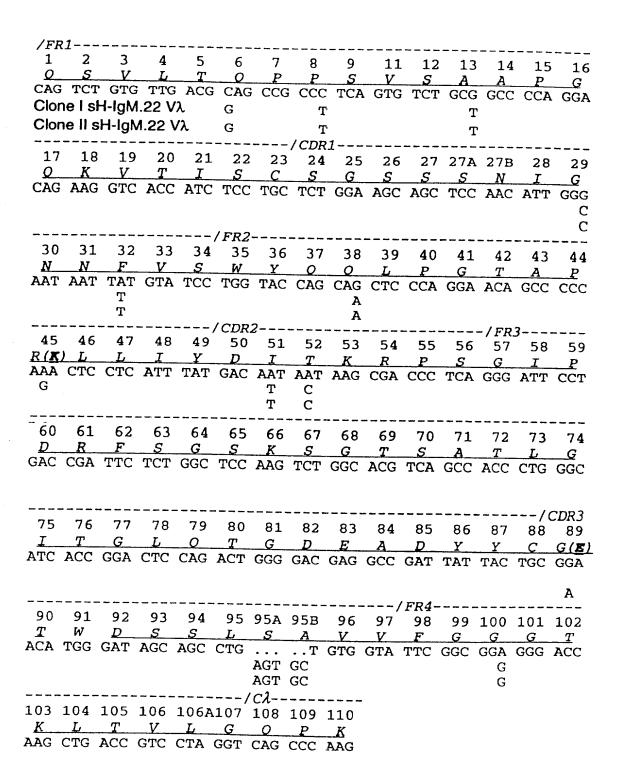


Figure 36

Sequence of MSI 19-D10 VH

FR1															
CAG	GTG	CAG	CTG	CAG	GAG	TCG	GGC	CCA	GGA	CTG	GTG	AAG	CCT	TCG	GAG
×	•	×	_	×											
17	18	19	20	21	 22	23	24	25	26	27	 28	 29	, 30	/ <i>CDH</i> 31	1
ACC	CTG	TCC	CTC	ACC	TGC	ACT	GTC	TCT	GGT	GGC	TCC	ATC	AGT	AGT	
Т	L	S	L	Т	С	T	V	S	G	G	S	Ι	S	S	
Y	Y	W	S	W	I	R	Q	P	P	G	K	G	L	E	
			CDE	12											
47	48	49	50	51	52	53	54	55	56	57	58	59			
														-	
62	63	64	<i>/</i>	/ <i>FH3</i> - 66	 67	 68	 69	70	71	 72	 73	 74	 75	76	
TCC	CTC	AAG	AGT	CGA	GTC	ACC	ATA	TCA	GTA	GAC	ACG	TCC	AAG	AAC	
S	L	K	S	R	V	T	Ι	S	V	D	Т	S	K	N	
77	78	79	80	Ω1	02		020	026	03	04		06	07	00	
CAG	TTC	TCC	CTG	AAG	CTG	AGC	TCT	GTG	ACC	GCT	GCG	GAC	ACG	GCC	
Q	F	S	L	K	L	S	S	V	T	A	Α	D	T	Α	
	. -				/	CDR	3								
100D															
TTT	GAC	TAC	TGG	GGC	CAG	GGA	ACC	CTG	GTC	ACC	GTC	TCC	TCA	GGG	
F	D	Y	W	G	Q	G	T	L	V	Т	V	S	S	G	
	1 CAG Q 17 ACC T 32 TAC Y 47 TGG W 62 TCC S 77 CAG Q 1000 TTT	CAG GTG Q V 17 18 ACC CTG T L 32 33 TAC TAC Y Y 47 48 TGG ATT W I 62 63 TCC CTC S L 77 78 CAG TTC Q F 89 90 GTG TAT V Y 100D 101 TTT GAC	1 2 3 CAG GTG CAG Q V Q 17 18 19 ACC CTG TCC T L S 32 33 34 TAC TAC TGG Y Y W 47 48 49 TGG ATT GGG W I G 62 63 64 TCC CTC AAG S L K 77 78 79 CAG TTC TCC Q F S 89 90 91 GTG TAT TAC V Y Y 100D 101 102 TTT GAC TAC	1 2 3 4 CAG GTG CAG CTG Q V Q L 17 18 19 20 ACC CTG TCC CTC T L S L 32 33 34 35 TAC TAC TGG AGC Y Y W S	1 2 3 4 5 CAG GTG CAG CTG CAG Q V Q L Q 17 18 19 20 21 ACC CTG TCC CTC ACC T L S L T	1 2 3 4 5 6 CAG GTG CAG CTG CAG GAG Q V Q L Q E 17 18 19 20 21 22 ACC CTG TCC CTC ACC TGC T L S L T C	1 2 3 4 5 6 7 CAG GTG CAG CTG CAG GAG TCG Q V Q L Q E S 17 18 19 20 21 22 23 ACC CTG TCC CTC ACC TGC ACT T L S L T C T 32 33 34 35 36 37 38 TAC TAC TGG AGC TGG ATC CGG Y Y W S W I R	1 2 3 4 5 6 7 8 CAG GTG CAG CTG CAG GAG TCG GGC Q V Q L Q E S G 17 18 19 20 21 22 23 24 ACC CTG TCC CTC ACC TGC ACT GTC T L S L T C T V	1 2 3 4 5 6 7 8 9 CAG GTG CAG CTG CAG GAG TCG GGC CCA Q V Q L Q E S G P 17 18 19 20 21 22 23 24 25 ACC CTG TCC CTC ACC TGC ACT GTC TCT T L S L T C T V S	1 2 3 4 5 6 7 8 9 10 CAG GTG CAG CTG CAG GAG TCG GGC CCA GGA Q V Q L Q E S G P G 17 18 19 20 21 22 23 24 25 26 ACC CTG TCC CTC ACC TGC ACT GTC TCT GGT T L S L T C T V S G	1 2 3 4 5 6 7 8 9 10 11 CAG GTG CAG CTG CAG GAG TCG GGC CCA GGA CTG Q V Q L Q E S G P G L 17 18 19 20 21 22 23 24 25 26 27 ACC CTG TCC CTC ACC TGC ACT GTC TCT GGT GGC T L S L T C T V S G G Y Y W S W I R Q P P G 17 48 49 50 51 52 53 54 55 56 57 TGG ATT GGG TAT ATC TAT TAC AGT GGG AGC ACC W I G Y I Y Y S G S T 17 78 79 80 81 82 82A 82B 82C 83 84 CAG TTC TCC CTG AAG CTG AGC TCT GTG ACC S L K S R V T I S V D 18 79 80 81 82 82A 82B 82C 83 84 CAG TTC TCC CTG AAG CTG AGC TCT GTG ACC GCT Q F S L K L S S V T A 19 90 91 92 93 94 95 96 97 98 99 GTG TAT TAC TGT GCG AGG TCG GCA CAG CAG V Y Y C A R S A Q Q Q 1 TTT GAC TAC TGG GGC CAG GGA ACC CTG GTC ACC 10 TTT GAC TAC TGG GGC CAG GGA ACC CTG GTC ACC	1 2 3 4 5 6 7 8 9 10 11 12 CAG GTG CAG CTG CAG GAG TCG GGC CCA GGA CTG GTG Q V Q L Q E S G P G L V 17 18 19 20 21 22 23 24 25 26 27 28 ACC CTG TCC CTC ACC TGC ACT GTC TCT GGT GGC TCC T L S L T C T V S G G S	1 2 3 4 5 6 7 8 9 10 11 12 13 CAG GTG CAG CTG CAG GAG TCG GGC CCA GGA CTG GTG AAG Q V Q L Q E S G P G L V K 17 18 19 20 21 22 23 24 25 26 27 28 29 ACC CTG TCC CTC ACC TGC ACT GTC TCT GGT GGC TCC ATC T L S L T C T V S G G S I	1 2 3 4 5 6 7 8 9 10 11 12 13 14 CAG GTG CAG CTG CAG GAG TCG GGC CCA GGA CTG GTG AAG CCT Q V Q L Q E S G P G L V K P 17 18 19 20 21 22 23 24 25 26 27 28 29 30 ACC CTG TCC CTC ACC TGC ACT GTC TCT GGT GGC TCC ATC AGT T L S L T C T V S G G S I S ACC CTG TCC CTC ACC TGC ACT GTC CTC GGT AGG CCC CCA GGA AAG GGA CTG T L S L T C T V S G G S I S 12 33 34 35 36 37 38 39 40 41 42 43 44 45 TAC TAC TGG AGC TGG ATC CGG CAG CCC CCA GGG AAG GGA CTG Y Y W S W I R Q P P G K G L 13 48 49 50 51 52 53 54 55 56 57 58 59 60 TGG ATT GGG TAT ATC TAT TAC AGT GGG AGC ACC AAC TAC AAC W I G Y I Y Y S G S T N Y N 1 G Y I Y Y S G S T N Y N 1 G Y I Y Y S G S T N Y N 1 C T C CTC AAG AGT CGA GTC ACC ATA TCA GTA GAC ACC ACC AAC S L K S R V T I S V D T S K 1 C T C CTC AAG AGT CGA GTC ACC ATA TCA GTA GAC ACC GCT GCG GAC ACC Q F S L K L S S V T A A D T 1 C C C C C C C C C C C C C C C C C C	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 CAG GTG CAG CTG CAG GAG TCG GGC CCA GGA CTG GTG AAG CCT TCG Q V Q L Q E S G P G L V K P S

Sequence of MSI 19-D10 $\mbox{V}\kappa$

FR 1	/													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
GAC	ATC	GTG	ATG	ACC	CAG	TCT	CCA	GAC	TCC	CTG	GCT	GTG	TCT	CTG
D	I	v	M	T	Q	S	P	D	S	L	A	V	S	L
								CDH	77	~~~	27	273	275	276
16	17	18	19	20	21	22	23	24	25	20	21	2/A	4/B	2/C
GGC	GAG	AGG	GCC	ACC	ATC	AAC	TGC	AAG	TCC	AGC	CAG	AGT	GTT	TTA
G	E	R	A	T	I	N	C	K	S	5	Q	5	٧	יג
										/FR2				
27D	27E	27F												
TAC	AGC	TCC	AAC	AAT	AAG	AAC	TAC	TTA	GCT	TGG	TAC	CAG	CAG	
Y	S	S	N	N	ĸ	N	Y	L	A	W	Y	Q	Q	
											. 005	•		
										,				
39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
AAA	CCA	GGA	CAG	CCT	CCT	AAG	CTG	CTC	ATT	TAC	TGG	GCA	TCT	ACC
K	P	G	Q	P	P	K	L	L	I	Y	W	A	S	T
-														
			, ED2											
		56										66	67	68
CGG	GAA	TCC	GGG	GTC	CCT	GAC	CGA	ጥጥር	AGT	GGC	AGC	GGG	TCT	GGG
R	E	s	G	v	P	D	R	F	s	G	S	G	S	G
		_												
							~~					01	02	
69	70	71	72	73	74	75	76	77	78	79	CCM	CAA	CAT	GTG
ACA	GAT	TTC	ACT	CTC	ACC	ATC	AGC	AGC	CIG	CAG	GCI	GAA	GWI	V
T	D	F	T	L	T	1	\$	5	L	Q	A	E	ט	•
		,				CDR	13							/FR4
84	85	86	87	88	89	90	91	92	93	94	95	96	97	98
GCA	GTT	TAT	TAC	TGT	CAG	CAA	TAT	TAT	AGT	ACT	CCT	CTC	ACT	TTC
A	v	Y	Y	C	0	0	Y	Y	S	T	P	L	${f T}$	F
	•	-	-	-	~	-	-	=	-					
								,	/Cĸ-					
99	100	101	102	103	104	105	106	107	108	109	110	111	112	113
GGC	CCT	GGG	ACC	AAA	GTG	GAT	ATC	AAA	CGA	ACT	GTG	GCT	GCA	CCA
G	P	G	T	K	v	D	I	K	R	${f T}$	V	A	A	2

Mixed Primary Glia sH-lgM.22 Ca²⁺ response

- ratio cell #1
- ratio cell #2
- \triangle sH-lgM.22 (3 μ g/ml)
- A Br-A23187 (10μM)

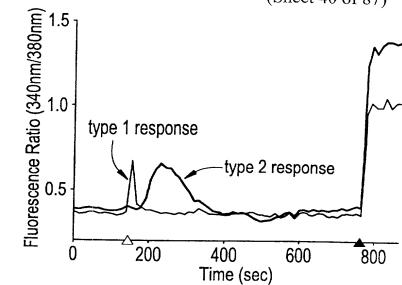


FIG. 39B

Mixed Primary Glia SCH 94.03 Ca²⁺ response

- ratio cell #1
- ratio cell #2
- Δ SCH 94.03 (3µg/ml)
- ▲ Br-A23187 (10μM)

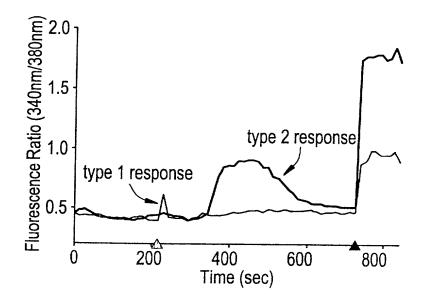


FIG. 39C

Mixed Primary Glia CH 12/sH-lgM.14 Ca²⁺ response

- ratio cell #1
- ratio cell #2
- Δ CH 12 (3µg/ml)
- \triangle sH-lgM.14 (3 μ g/ml)
- A Br-A23187 (10μM)

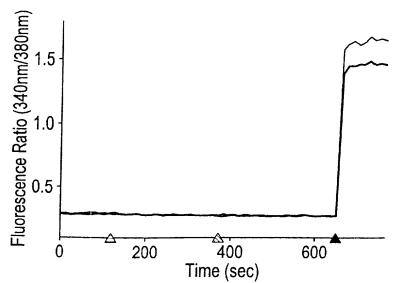


Figure 39

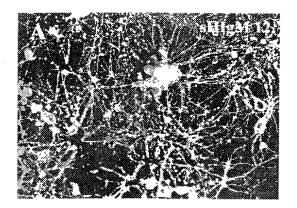




Figure 40

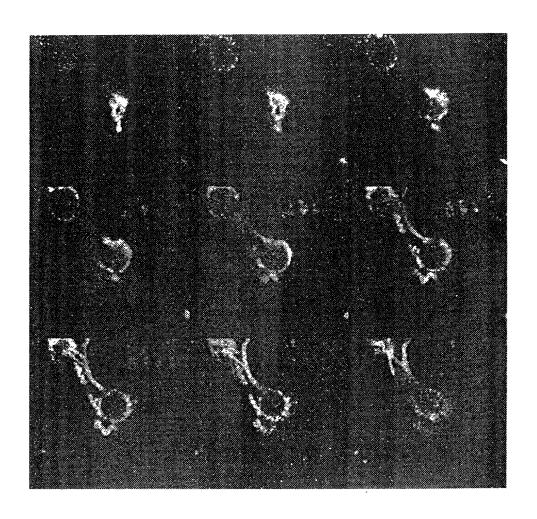


Figure 41

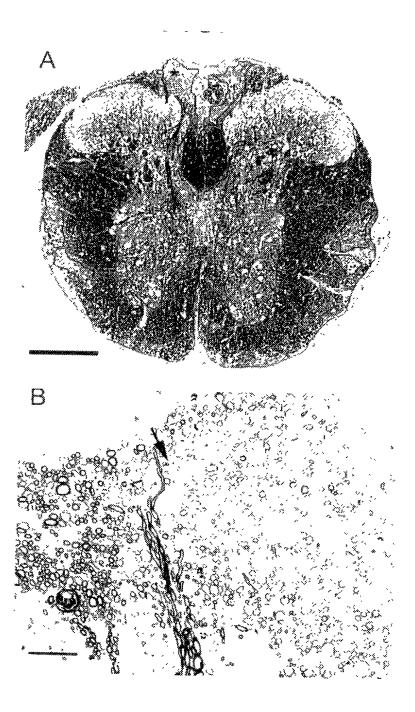


Figure 42

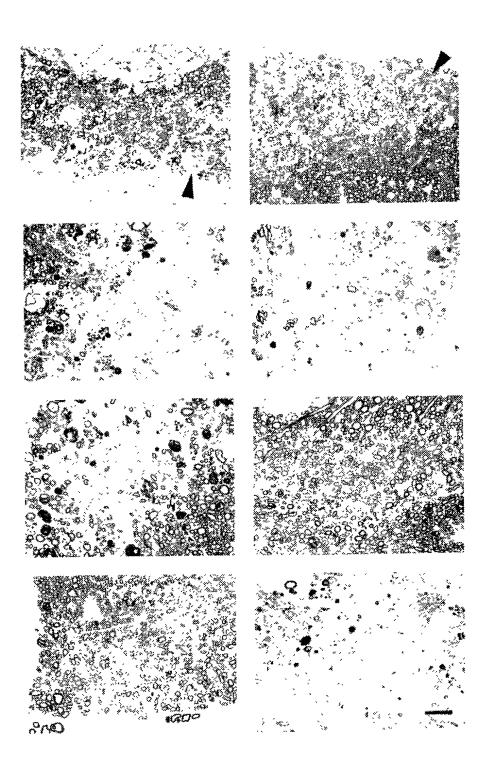


Figure 43

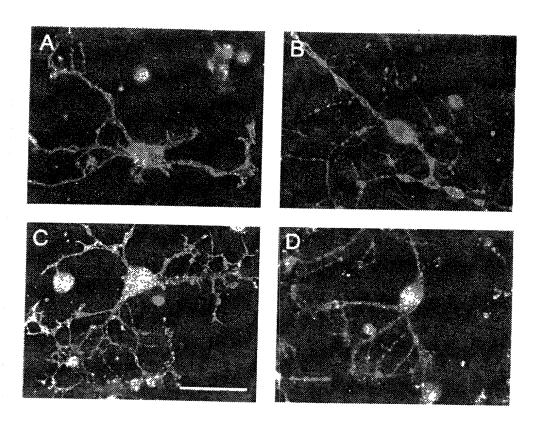


Figure 44

Translation of CB2b-G8 $V_{_{\rm H}}$:

						•	R		-	1	М	G	Т	15					20		
								х						15 P G CC	G						
		25 A GCG		G GGA	F TTC	I ATT	30 F TTC	s AGT	_ CD S AGC	R1 - Y TAT	IMG G GGC	T 35	• • •							R CGC	
45 V	P	G	к	G	L	E	W	v	A	55 V	I	W	Y	CDR2 D GAT	G	S	D	K			`
Y	v	D	70 S	V	K AAG		G	75 R	F	т	I	s	80 R	R D GAC	N	- S TCT	ĸ	85 N	т	T L CTC	3
L	90 Q	м	N	S	L	95 R	A	E	D	Т	100 A	V	Y	Y TAC	С		R			S	
G	W	Y	W	s	С	D 1	15 S	W	G	Q	G	T	L	V	I	V	25 S	s			

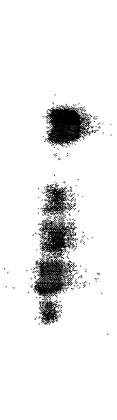
Translation of CB2b-G8 V_{λ}

<	F R 1	- I M G T -	
			P G Q S I T I S
		C CTG TCT GGG TCT C	CT GGA CAG TCG ATC ACC ATC TCC
25		_ CDR1 - IMGT	40
C T G CTG ACT GGA A	T S S D V G CC AGC AGT GAC GTT GG	G Y N Y T GGT TAT AAC TAT	V S W Y Q Q GTC TCC TGG TAC CAA CAG
F R 2 -	I M G T	>	< DR2 - IMGT
		55 I Y D V S	
_CAC CCA GGC A	AA GCC CCC AAA CTC ATG	G ATT TAT GAT GTC AGT .	GAT
		_	R 3 - I M G T
70 R P S G CGG CCC TCA GG	75 G V S N R GG GTT TCT AAT CGO	80 F S G S K C TTC TCT GGC TCC AAG .	85 S G N T A S TCT GGC AAC ACG GCC TCC
		· · · · · · · · · · · · · · · · · · ·	>
90 L T I :	95 S G L O A E	100 D E A D Y	CDR3 - IMGT 105 110 Y C S S Y T S S
			AC TGC AGC TCA TAT ACA AGC AGC
	115	120	125
			G Q P K A A P S GT CAG CCC AAG GCT GCC CCC TCG

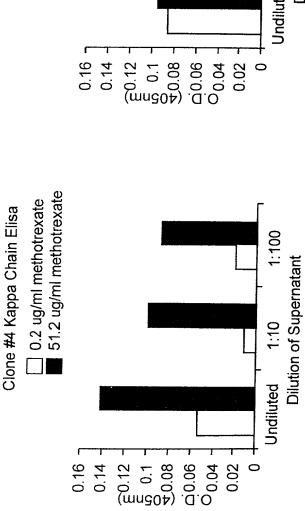
(Sheet 48 of 87)

-





Clone #5 Kappa Chain Elisa



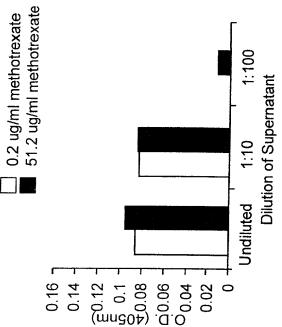
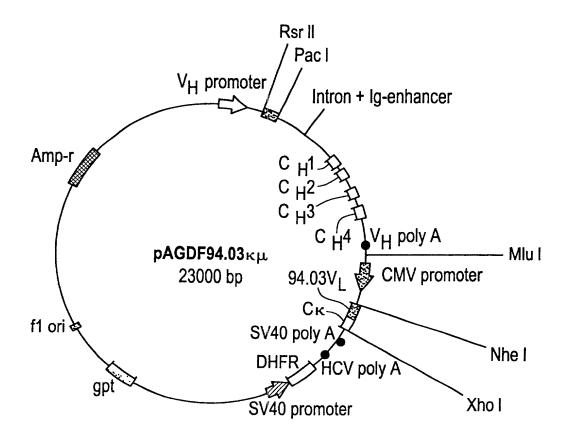


Figure 47



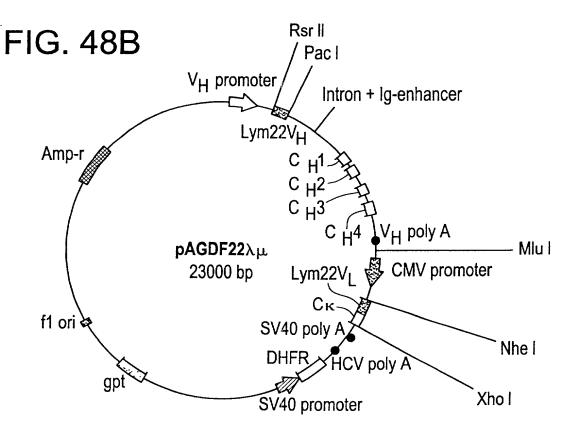
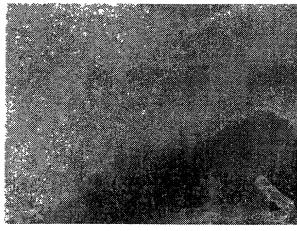


Figure 48

Postnatal Rat Cerebellum as Substate



Mouse 94.03



Humanized 94.03 clone 1



Humanized 94.03 clone 2

Figure 49

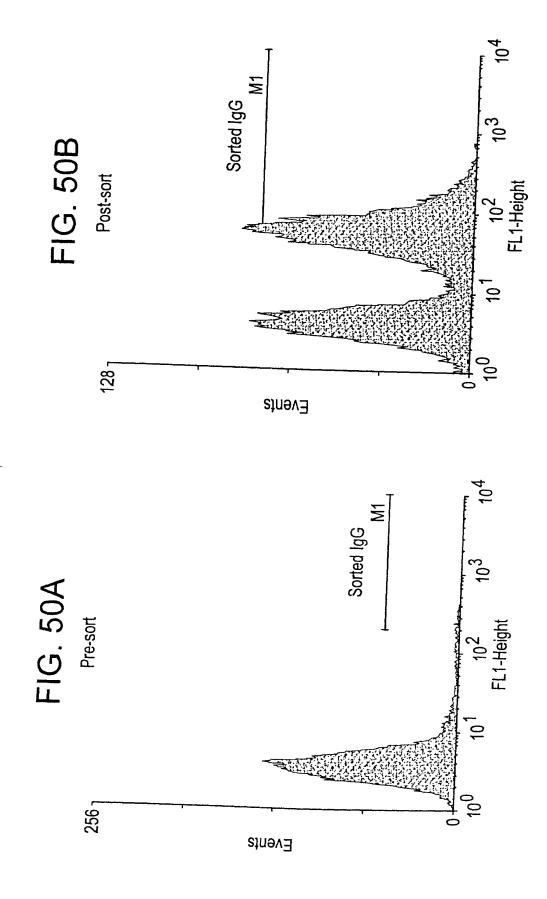
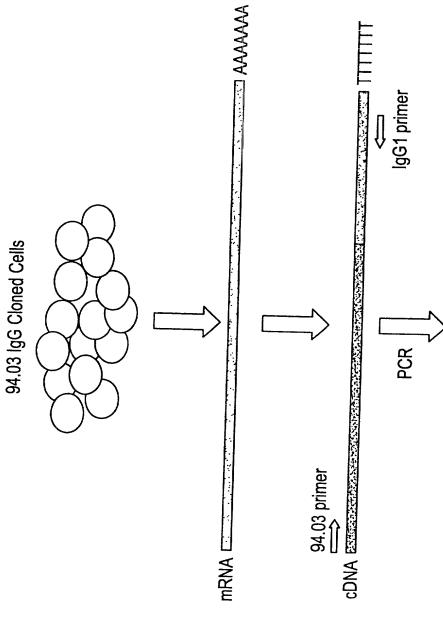


Figure 50

Sequencing of 94.03 lgG



ATGCAGTTAACATGCATACTGAACTGC**ATGCTTTCCAG** Sequence with 94.03 V region plus IgG1

Figure 51

09 $V_{_{\rm R}}$ Sequence with translation:

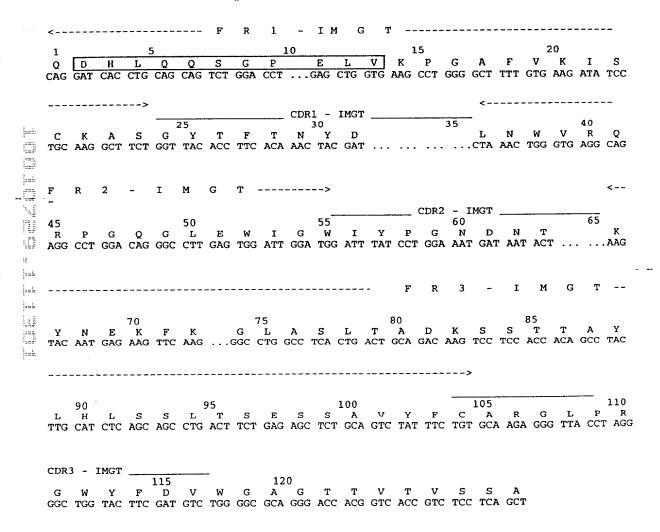


Figure 52

OUR BUILDING

Translation of 09 kappa light chain 1:

L T T W M AAC ATT GTA ATG C K A S TGC AAG GCC AGT K P E Q AAA CCA GAG CAG CGG TAC ACT GGG L T I S CTG ACC ATC AGC A P Y T F CCG TAC ACG TTC G
--

Translation of 09 kappa light chain 2:

!	F	רי	•	F-1	E	્ ૦. ૫
† †	N AAT	E GAG	; ; V	ACT	T ACT	IMGT 110 E Y AA TAC
 	I ATT	CAA	65	: ₽	F TTC	- GAA
!	20 T ACT	Y		: ტ	D GAT	CDR3 N AAT
! ! !	I ATT	W TGG		; ¤	85 T ACA	CAT
!	T ACC	40 A GCC		: н	G GGT	CAG
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	EGAA	L	IMGT	: 1	S TCT	105 0 CAA
!	ი გიგ		H 19	; m	: '	vi ngt
; ! !	15 P CCT (CDR2	: x	: :	Y
Ė	F TTT	:		TCC F	80 6 6GA	Y
Ö	A GCA	35	i i	GGA	SAGT	M ATG
Σ	A GCT	IMGT		TCT	ა ე	100 A GCA
н	CTT	H 1 :	, i S.≯. I	ı	S AGT	1 1 TTT
1	10 Y TAT	CDR1 Y TAT	P .	ATC	FTTC	DGAT
Н	S	A A A	ı	CTT	75 R AGG	E
rk	PCCA	30 S AGT	Fi I	CTT	S TCA	CCT TOO
Ŀı	STCT	I		AAG	:	95 E GAG
† † 1	CAG	S	Z OZ	AAT	o CCA	L CTG
1 1 1	5 T ACC	K AAG	H	ACT	I ATT	S AGC
1 1	IATA	S AGT	ا ۲	AAA	70 G GGA	SAGT
1 1 1		25 A GCA	7 0	GGA	S TCT	ATC
1	V Q GTC CAG	C R	ж Б	CCT	L Q S TTG CAA TCT	D T CTC ACC
· · · · · · · · · · · · · · · · · · ·	D GAT	C R TGT AGG	፫ 4 ጊር		r TTG	CTC

Translation of AKJR 4 Heavy Chain:

!	န Tcc	i	~ 5	,	!	Ę		!	_ E +		ο υ
į		į	ဝ ၅ ၁	١ ١	,	Y TAT		!	F TTT	ב ק	GGT CCC
1	CHC	; ; 1	გ ემ			65	(E	V GTG	1	
	20 R AGA		V GTC					U	ACG 0	נפרי	T ACC
1	r CTG	!!!!	TGG			a TCA	>	Σ	85 S AGC		GAG
!	s TCC	j !	40 S AGC			S AGT	۲	⊣	K AAG		CAG
1	ა ე	, !	A TG		IMGT	· .	ı	ı	န္ ၁၁၁		105 A GCG
į	ი მმმ		:		ř	60 S AGT	۳	า	N AAT	^	TGT
i	15 P CCT		:		DR2	DGAT	ρ	4	D GAC		$^{ m Y}$
E	Q CAG		:			g GGT ([z	4	80 R AGA		$^{ m Y}$
ტ	v GTA		35			S AGT	_		s TCC		I ATA
Σ	r TTG	TMGT	A 250			CIT	!		IATC	!	100 A GCC
н	ဗ္ဗ	F I	Y TAT	<u>۸</u>	İ	S S AGT	1		T ACC		T ACG
1	10	CDR1	DGAC			S TCA			FTTC	!	D GAC
н	G A	·	IATC	1		V GTC			75 R CGA	1	e Gag
ĸ	ა ე	į	30 F TTT	E-		W TGG			g 66C		₽
ſτι	S TCT		s AGC	ტ		E GAG			•	! ! !	95 AGA
1	E GAA		F TTC	Σ	1	CTG CTG	1		K AAG] 	r CTG
i !	5 L TTG		а G G A	н		G GGA	1		V GTG	 	S AGC
į	L CTA	^ '	s TCT	ı		K AAG	1		70 30 1100	l i I I	S AGC
i 	CAR		25 A GCC	7		ი ი		•	D GAC	; ; ;	r CTG
; ! !	v GTG		A GCA	K		೧೭೩	1 1 1		A GCA		O O O
· · · · · · · · · · · · · · · · · · ·	1 E GAG	;	C TGT	Ŀ	45	GCT	1 1		Y		CTC

Figure 55

Q R R W G Q G T L V T V S S G S A P T L CAG CGT CGC TGG GGA ACC CTG GTC ACC GTC TCA GGG AGT GCA TCC GCC CCA ACC CTT

Translation of AKJR 4 Kappa Light Chain:

 	T ACT		CAG		N AAT	! ! !	T ACT	GT	110 Y TAC	F	
!	I ATC	; ! !	CAG	V	65	E	F	HI -	S Y AGT TAC	v GTC	
1	20 T ACC	; ; ;	Y TAT		:	ტ	E GAA	CDR3		130 S TCT	
! ! !	V GTC	!	₩			×	85 T ACA	J	Y TAT	CCA	
! ! !	R AGA	40	A 3000			н	8 9		Q CAG	g A GCA	
	D GAC	1	r Trg	٤		1			105 Q CAG	A GCT	
!	უ ტეტ		:	Į.	09	m	•	î	၁ ညီ	v Gre	
	15 V GTA		:			æ	•	1 1 1	Y TAC	125 T ACT	
E	s TCT		:	ر	F F TIT	ĺΉ	80 9 GGC	 	Y TAT	CGA A	
ဗ	gc A	35	•		A		s AGT		T ACT	A K	
×	S TCT	IMGT _			K AAG	! ! !	၁၁၅		100 A GCA	I ATT	
н	CIG	Σi	:	Ŷ	55 Y TAT	! ! !	R AGA	1	S TCT	D GAC	
•	10 T ACC	CDR1	W TGG		I ATC		F TTC	1	D GAT	120 V GTG	
-	s TCC		SAGC		r CTG	1	75 R AGG		D GAT	K AAG	
æ	PCCT	30	SAGT	' €+	CIC	1	s TCA	1	PCCT	ACC	
[z _i	s TCT		I ATT	Ö	A A A	1	:		95 CAG	ტ მმმ	
! !	CAG		SAGT	×	50 P CCT	 	P CCA	1	r CTG	G GGA	
	5 T ACC		CAG	н	A		v GTC	 	s AGC	115 G GGC	
	M ATG	^ ¹	S AGT	ı	X AAA		70 GGG	!	S AGC	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
; ; ;	CAG	25	A GCC	7	ე ე	! !	s AGT		I ATC	T ACT	
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	I Q ATC CAG	i !	CGG	æ	P CCA (E GAA		90 T ACC	J OTO	
· · ·	1 D GAC	1	ာ အင်	ŢZ4	45 K AAA	i 1 1	r TTA	!	L CTC	a CCC	

dir an an an

Figure 56

Translation of CB2i-E12 Heavy Chain:

1	s TCC	CAG	! !	N AAC	1	Y TAC		110 Y TAT
1	V GTC	R CGA	٧	65	Ħ	₹ 800		S
	20 K AAG	V GTG			ტ	T ACA (R CGA
; ! !	V GTG	™ W		T ACA	×	85 S AGC		D GAT (
1	S TCA	40 H CAC		ე ე	Н	ATC		R AGA
	A GCC	ATG		IMGT _ G T GGT	1	S		105 A GCG
	E GAG	:		- IM 60 S AGT	m	T ACG	۸ ۱	CTGT
i	15 X XCG			CDR2 N AAC	¤ ;	D GAC	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	Y TAC
H	K	:		CCT	[II4	80 R AGG	 	Y TAT
Ö	AXG ×	35		N		T ACC	1	V GTG
Ħ	×××	IMGT _		I	! ! !	M ATG	 	100 A GCC
H	×	- IN Y TAC	^ !	55 W TGG	 	T ACC	† - - -	T ACG
1	10	CDR1 G		9 899 8	!	V GTC	1	DGAC
ᠬ	R AGG	T ACC	!	M ATG		75 R AGG	!	D GAC
ĸ	х ö.	30 F	, E+	W TGG		ဗဗ	 	s TCT
ľΉ	:	ACC.	ტ	E GAG		:		95 R AGA
!	:	Y	Σ	50 L CTT		Q CAG	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	L CTG
;	ب :	G	н	ტ ტ	1	F TTT	1	r Agg
i !	•	S	1	CAA	!	70 K AAG	!	S AGC
1 1 1	:	25 A GCT	7	g gga	!	O CAG	1	L CTG
 	:	K AAG	pc;	P G Q CCT GGA CAA	1	A Q GCA CAG		90 E GAG
\ !	н :	C K	ᄄ	45 A GCC	1	Y TAT	!	M ATG

Figure 57

P G R N Y F D Y W G \oplus G T L V T CCG GGA AGG AAC TAC TTT GAC TAC TGG GGC CAG GGA ACC CTG GTC ACC

CDR3 - IMGT _

Translation of CB2i-E12 kappa chain:

		S		CAG	;	S AGC	! ! !	TACT	1GT	110 S TCT	
	1	L CTC		CAG	v 65	:	E+	F TTC ?	í I	S AGC T	
	!	20 T ACC	>	TAC		:	ტ	D GAC 1	CDR3	GGT A	
		A GCC	3	TGG		:	E	E S		Y TAT G	
•	; ;	R AGA	 40	သည		:	н	85 GGA		Q CAG I	
		E GAA	, .	TTA	IMGT _	:	1	S TCT (LUS Q CAG C	
	i !			:	- IM	:	m	:	^	ngir o	
l	i !	15 P CCA		:	CDR2	:	R.	:	i :	Y TAC 1	
	Ħ	S TCT		:	1 0	ာည္ သည္	Ħ	10 G GGG	į	Y TAT 1	
	Q	L	35	:	1	GCA		80 S (; ; ;	V 3TG	
	Ħ	S TCT	IMGT .	:	ن ا	GGT	! ! !	ე ე	100	A GCA G	
	Н	L CTG	i >	TAC	55	TAT	 	S AGT	i 	F TTT (
	1	10 T	CDR1	AGC	Н	ATC		F TTC	1	D GAT	
	Н	5 5	S	1	ដ	CTC		75 R AGG	 	GAA	
	民	P CCA	δ		H	CTC		D GAC	1 1 1	CCT	
	Ĭ.	S TCT			ĸ	AGG	i !	:	95	E GAG	
	1	Q CAG	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		50 P	CCC	!	Ф ССА	1	L CTG	
		5 T ACG	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Æ		1	I ATC	 	R AGA	
	!	ĘH	25 A 25 A ECK 700	1	Ø Ø	CAG		ပ္သင္သ ၁၅	 	S AGC	
	;	V GTG	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \) 7	ტ	ეეტ ე	; ! !	T ACT	, ! !	I S ATC AGC	
	1	I A ATT	۲ A			CCT	† 	A GCC	06	T. ACC	
	V	1 E GAA	<u>ာ</u> ည	[I.	45 X	AAA		R AGG	,	CHO	

115 H T F G Q G CAC ACT TTT GGC CAG GGG

Translation of CB2i-E7 Heavy Chain:

		! 0	ı		ניז	,		!					
		S	1	ø			N AAC	ļ	Y TAT		110 S	5	
		L CTC	!	æ	C C C	•	65	٤٠	r CTG		လ ငို		
		20 R AGA	1	H			:	ဗ	s TCA O		\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \		
	ļ	LCTG	; ;	∑ 			, A				1		
							ACA	Ħ	85 N 7 AAC		ט ק דעה		
 C	! !	S TCC	!	40 80			Y TAC	н	K AAG		R AGA		
naın	i !	9 9	-	∑	9	IMGT	S AGT	1	A GCC		105 A GCG		
5	!	G GGA			• •	Ä	$\sim m$	m	AAC	٨	C TGT C		9 9
7	1	15 P CCT				CDR2	S AGT 7	¤	D GAC A				
neavy	E+	K AAG O			•	8				i !	Y r TAC		125 Q CAA
1	ტ						S ? AGT	[±4	80 R AGA		Y TAT		ე <u>ე</u> ნე
1		v 3 GTC	c.	35			S AGT	,	S TCC	!	V GTG		W TGG
į	Œ	L TTG	IMGT	Y TAC			I ATT		I ATC		100 A GCT		V GTC
,	Н	ວອອ	1	Y TAC	\ \	 	55 Y TAC	#	T ACC	! ! !	T ACG		D GAC (
	1	100	. CDR1	DGAC	1		S TCA		F	 	D GAC		120 M ATG
	~-1	× g.		S AGT	 		V GTT		75 R CGA		E GAG		GGT
	æ	:		30 F	E∗		W TGG		ე ცე		A GCC		Y
	[I4	:		ACC	ტ		e Gag		•	1 0	R AGA		Y TAC '
	!	:		F	¤	50	CTG	!	K AAG	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	CTG		Y TAC
		ب :		G GGA	н		9 966		V GTG	! !	SAGC		15 Y AC
	!	:	^ · ·	S TCT	ı		k Aag	! !	70 S TCT	! ! !	NAAC		Y TAC
		:	20	GCC GCC	7		P G K CCA GGG AAG	; ; ;	D GAC		MATG	MGT	W TGG
	; ; ;	:	1 1 1	C A TGT GCA	ĸ		P G CCA GGG	i 	A GCA	90	CAA	H	S AGC
	;	H :	1 1 f	C TGT	Įī.	45	GCT		Y A D S TAC GCA GAC TCT G		L Q M N CTG CAA ATG AAC A	CDR3	S S W Y Y Y AGC AGC TGG TAC TAC

Figure 59

Translation of CB2i-E7 kappa Chain:

!	.	-		F.	!	.	£, 0,
 	ACT	o CAG		ACT	i	TACT	IMGT 110 C TGC
; ! !	IATC	Q CAG	·	65	₽	F	- K AAG
	20 T ACC	Y		:	ტ	D GAT	CDR3
1	V GTC	W TGG		:	Ħ	85 T ACA	Y
1	r Aga	40 A GCC		:	Н	ი მი	K AAG
1	D	L L TTA	Ę	TMGT.	ı	s TCT	105 Q CAA 7
1	G GGA	:		- TM	м	:	C C FIGH
1	15 V GTA		Ç		ρ¢	:	Y TAC
E	s TCT		,	s TCC	្រ	80 G GGA	Y TAT
ტ	A GCA	35		A GCA		S AGT	TACT
E	S	IMGT -		A GCT	1	9	100 A GCA 2
н	L	i i	^ !	55 Y TAT	!	N AAT	CTT
ı	10 S TCC	CDR1		I ATC		F	D
↔	S	N AAT		L CTG	; ; ;	75 R CGG	E
ĸ	PCCA	30 S AGC	' E+	r Crc	 	S TCT	CCT
ជ្រ	S TCT	IATT	ტ	K AAG		:	95 O CAA
! !	Q CAG	უ ე	×	50 P CCT	!	P	CHG
	5 T ACC	O CAG	H	V GTT		V GTC	S
 	M ATG	S S AGT	ı	K AAA	! 	70 G GGG	S
1	I Q ATC CAG	25 A GCG	73	P G CCA GGG A	1	S TCA	I
; !	IATC	25 C R A TGC CGG GCG	æ	PCCA	!	Q CAA	90 T ACC
· · · · · · · · · · · · · · · · · · ·	1 D GAC	ပည် မ	ĺυ	45 K AAA	1	L TTG	L

Figure 60

PSHFRGRD CCCTCT CACTTT CGG GGG AGG GAC

Translation Of MSI 19-E5 Light Chain

] 	N AAC	CAG	;	T ACC	1 1 1 1	TACT	- I 110 T ACT
1	T ATC	CAG		65	E	F TTC	CDR3 S AGT
1	20 H ACC 2	Y		:	O	D GAT	> rar
; ; ;	₹	¥ T		:	Σ	85 T ACA	Y TAT
!	r Agg	40 A GCT		:	н	ა <u>წ</u>	og
i ! !	GAG	rra	IMGT	:	ı	s TCT	105 O CAG (
	9 9	Y TAC	1		ю	:	or
! ! !	1.5 CTG	N AAC	CDR2	:	ρ¢	: :	Y TAC
H	s	N		S TCT	Į.	80 9	Y
ซ	V GTG	35 N AAT		A GCA		s AGC	C CTT
Σ	A GCA	IMGT _		TGG	1	ე ე	100 A GCA G
н	CIG	s TCC	^ '	55 Y TAC	1	S AGT	V GTG
ı	s TCC	CDR1 S AGC		I ATT	!	FTTC	D GAT
H	D GAC	TITC O	! ! !	d CHC	1	75 R CGA	GAA
ద	P CCA	30 L TTA	Ę-	CIA	1 1	D GAC	A B GCT
Įz,	S TCT	V GTT	ъ	k Aag	1 1	:	95 O CAG
1	C A G	S AGT	Σ	50 CCT	! !	PCCT	Crig
	ACC	890 CGG	н	P CCT	!	orc Grc	s AGC
1 1 1	M ATG	S AGC	1	CAG		70 G	S AGC
į	A GCG	25 8 177		G G G A		STCC	HE
1 1 1	I	K AAG	ĸ	P CCA	; ! !	R E CGG GAA I	90 H C
, ,	1 D GAC	n D T	ក្រ	45 K AAA		8 0 0 0	r CHO

P I T F G CCA ATC ACC TTC GGC

MGT

Translation of 04 kappa chain 2:

[AC C	Q CAG	! ! !	Y TAC	!	T ACT	IMGT 110 F T CT ACT
 	I ATC 2	o &	,		' [+	F TTC A	- IMG T ACT A
; 1	20 S AGC 7	40 Y (TAT C)		•	G	D GAT 1	CDR3 - Y
; 	V GTC 2	W TGG 7		:	×	85 T ACG G	CAT 1
‡ 	R AGG (A B GCC 1	09	:	н	. 9999	CAA
 	D	 V GTA	IMGT	:	1	S TCT (105 Q CAG
 	G GGA	5 .	ı	:	т	:	C C TIGHT
 	15 V GTA	m :	CDR2	:	pc;	:	Y
E	S TCA		2	န ၂၀၀	ſτι	80 G GGA	Y
ტ	T ACT		2	A GCA		S AGT	V GTT
×	s TCC	IMGT _		S TCG	!	ဗ ဗဗ္ဗ	100 A GCA
н	M ATG	30 IN	^	Y TAC	!	ACT.	r. CTG
ı	10 F TTC	CDR1	1	IATT		F	D
⊣	K AAA	T ACT	5.0	$^{ m L}_{ m CTG}$!	75 R CGC	GAA
ជ	H	S	E	L CTA	i 	D GAT	A GCT
ĺΉ	S TCT	> P	Ö	X AAA	1	:	95 Q CAG
 	o CAG	25 D GAT	Σ	CCT	1	PCCT	V GTG
! ! !	5 T ACG	CAG	н	S TCT	1	V GTC	SAGT
1	M ATG	S AGT	- 45	G Q GGA CAA	1	70 G GGA	S AGC
1	V GTA	A GCC	7	GGA	; ; ;	T ACT	ATC
1	IATC	K AAG	pt.	P CCA (; 	Y TAC	90 T ACC
>	1 D GAC	0 P	ני ני ע	AAA	1	R CGG	F

P L T F G A G CCG CTC ACG TTC GGT GCG

FIG. 63A

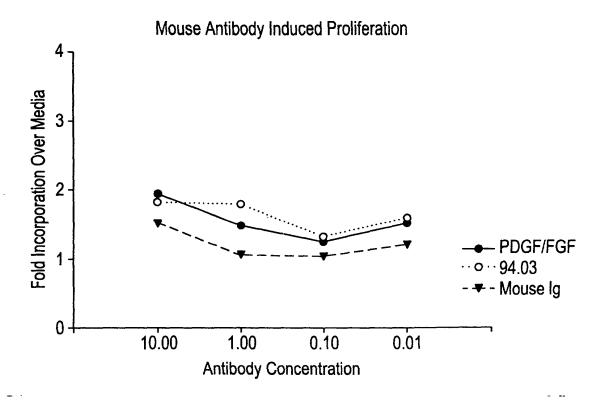


FIG. 63B

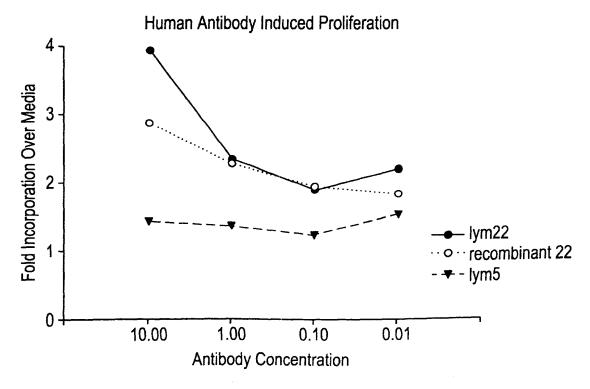
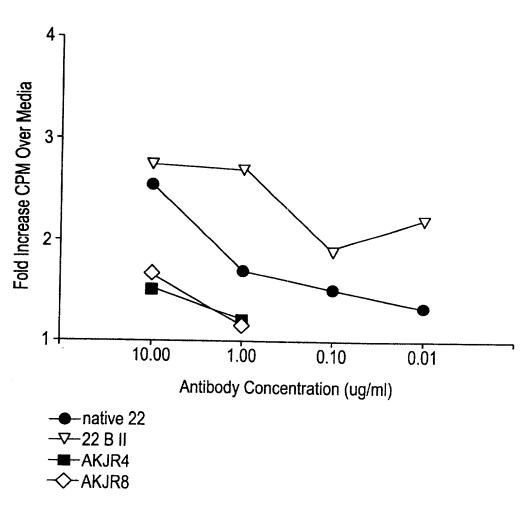
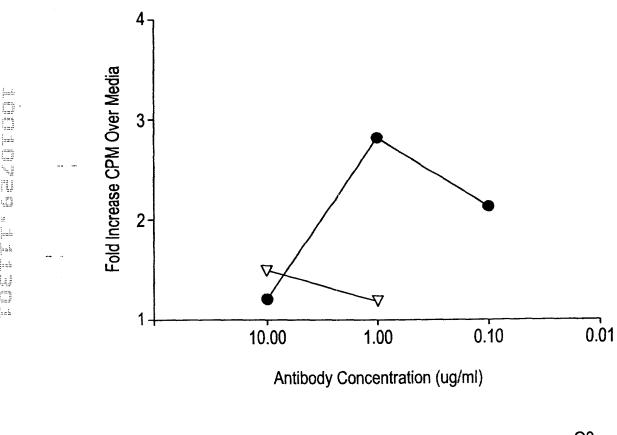


Figure 63

Human Antibody Induced 3H Thymidine Incorporation



Mouse Antibody Induced 3H Thymidine Incorportion



— 09 — SHL lg

Figure 65

Recombinant sHIgM 22 Binds Specifically to White Matter

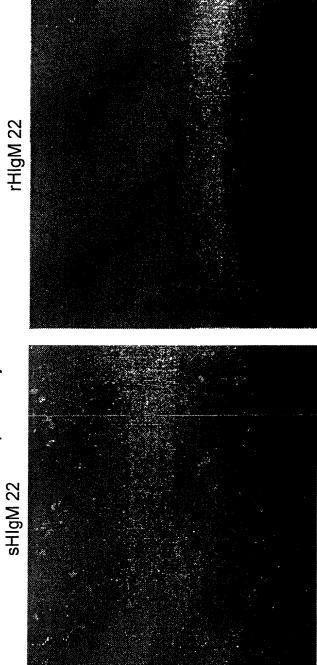


Figure 66

TRANSLATION OF 04 KAPPA CHAIN

1 - I M G K F M S T AAA TTC ATG TCC ACT CDR1 - IMGT 35 L I Y S A CTG ATT TAC TCG GCA 75 R F T G S CGC TTC ACT GGC AGT E D L A V GAA GAC CTG GCA GTT R I E L K	15 20 20 STA GGA GAC AGG GTC AGC ATC COMPANY OF A W Y Q A W Y	- IMGT 65	3 - I M G T 85 S G T D F TCT GGG ACG GAT TTC	CDR3> CDR3 -C Q Q H Y TGT CAG CAA CAT TAT A	
1	15 V G D R V GTA GGA GAC AGG GTC 	- IMGT 60	3 - I M G 85 S G T D TOT GGG ACG GAT	CDR3 C Q Q H Y TGT CAG CAA CAT TAT	
1	15 V G D R GTA GGA GAC AGG <	19 :	3 - I S G	C Q Q H TGT CAG CAA CAT	
1 - I M G T	15 V G D GTA GGA GAC	19 :	s .	105 C Q TGT CAG	
1 - I M G T	15 V G GTA GGA	19 :	m :	S T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D T T D	
1 - I M G T	15 V V GTA	19 :	•	ı	
1 - I M G T 15 K F M S T S V AAA TTC ATG TCC ACT TCA GTA CDR1 - IMGT 35 L I Y S A S CTG ATT TAC TCG GCA TCC F R 7 75 CGC TTC ACT GGC AGT GGA E D L A V Y Y GAA GAC CTG GCA GTT TAT TAC R F T G S G CGA GAC CTG GCA GTT TAT TAC R F T G S G CGA GAC CTG GCA GTT TAT TAC R F T G S G CGA GAC CTG GCA GTT TAT TAC R L E L K R	1	3DR2	x . :	ı	
1 - I M G T 10 K F M S T S AAA TTC ATG TCC ACT TCP CDR1 - IMGT 35 L I Y S A S CTG ATT TAC TCG GCA TCC T A S CGC TTC ACT GGC AGT GGA E D L A V Y GAA GAC CTG GCA GTT TAT R F T G S CGA TCC 120 E D L A V Y CAA GAC CTG GCA GTT TAT R L E L K R	T S I :	7.1	•	Y TA	
1 - I M G K F M S T AAA TTC ATG TCC ACT CDR1 - IMGT 35 L I Y S A CTG ATT TAC TCG GCA 75 R F T G S CGC TTC ACT GGC AGT E D L A V GAA GAC CTG GCA GTT R I E L K		N S TCC	80 GGA	1	R CGG
1 - I K F M AAA TTC ATG CDR1 - I CTG ATT TAC CGC TTC ACT CGC TTC ACT CGC TTC ACT R F T CGC TTC AC	G ACT 35	A GCA		1	K AAA
1 - I	S TICC	s TCG	ენნ ნ	100 A GCA	CTG
AAA AAA ACT L CTG CTG CGC CGC CGC CGC CGC CGC CGC CGC	H ÆH	> 55 Y TAC	T ACT	LCTG	e Gag
	10 F TTC CDR:	IATT	TIC	D	120 L CTG
K HQ 00H 14 1H -	K AAA AAA	L	75 R CGC	E GAA	r Agg
T T T T T T T T T T T T T T T T T T T	R H CAC CAC T T T T	r L CTA	D	A GCT	T ACC
F CAG CAG	S TCT S	G AAA		95 0 CAG	999
1 1		M 50 CCT	P	V GTG	A GCT
1	1	s TCT	V GTC	S	115 G GGT
AGG CAA AGC CAA AGC CAA AGC CAA AGC	ATG S S AGT	CAA	70 G GGA	s AGC	F
V V GTA 25 A GCC 2 C GCC C T T T T T T T T T T T T T T T T	V GTA	c GGA			
I C ATC R R R C AAG R C AAG R R R R R R R R R R R R R R R R R R	I ATC				LCTC
L D GAC C TGC F AAA AAA CGG TTC TTC	1 D GAC	4 5 K AAA	CGG	F	P

Figure 67

TRANSLATION OF O1 KAPPA CHAIN

1	N AAT	E GAG	!	TACT	1	TACT	,	IMGT 110 Y Y	
į	I ATT	CAA	V	65	Ę	F	İ	- IM E GAA '	
į	20 T ACT	Y			ტ	DGAT		CDR3	
	I ATT	W TGG			Σ	85 T ACA	į	H CAT	
	TACC	40 A GCC			н	g GGT		O CAG (
	E GAA	> L TTA		년 	ı	s TCT (105 Q CAA	
!	G GGA			- IMGT 60	m	:	^ !	ngr Tgr	
! ! !	15 P CCT			CDR2	ĸ	:		Y TAC 1	
E→	S TCT			S TCC	ĹĿı	80 G GGA		Y TAT 1	R GG
ტ	A GCA	35		G GA		S AGT 0	; ; ;	M ATG 1	K AAA O
Σ	A GCT	IMGT		STCT	1 1	5 9	1	100 A GCA 2	I ATA 2
н	L	1	Ŷ	55Y Y TAC	! ! !	SAGT	1	F TTT (E GAA 1
ı	10 Y TAT	CDR1 Y TAT	; ; ;	IATC	 	FTTC	 	D GAT	120 L CTG (
~	S TCT	K	1 1	CIT	1	75 R AGG	 	E GAA (K AAG 0
ĸ	P CCA	30 S AGC	I E⊣	CTT	1 1 1	STCA	1	P CCT	T ACC 7
ţzı	S TCT	I	ტ	K AAG	!!!	:	 	95 E GAG	999
 	Q CAG	s AGC	Σ	50 N AAT	!	PCCA	! ! !	L	999 9
i !	5 T ACC	K AAG	н	T ACT	1	I ATT	! ! !	s AGC	115 G GGA
!	I ATA	S S AGT	1	K AAA]] [70 G GGA	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	SAGT	F
1 1	Q CAG	25 A GCA	7	ტ ტ		s TCT	1 1 1	IATC	
; ! !		R AGG	œ,	PCCT		CAA	1	90 T ACC	
· - >	1 D GAT	0 1 1 1 1 1	[14	45 K AAA	 	L TTG		LCTC	

TRANSLATION OF HNK-1 KAPPA CHAIN

	TACT	. o cag	!	S AGT	1 - -	S TCT	IMGT 110 S F GT ITT	
j 1	ı DED	O CAG	V	65	E	Y TAT	- IM S AGT	
	20 S AGT	L			ဟ	D GAT	CDR3 . A GCT ?	
1	V GTC	# ₩ # GG			Σ	85 S TCA (Y TAT	
1	r Aga	A O N A A C		1 :	н	9 9 1 1	O CAA 1	
1 	E GAA	L ITA		- H	ł	s TCT (105 L CTA C	
	g GGA			- IMGT 60	m	:		
1	15 L CTG			CDR2	œ	•	Y TAC I	
€	E⊣			S TCC.	[14	80 R AGG.	Y TAT T	R CGG
ט	£)	35		T ACA T		s AGT A	D GAC T	K AAA C
Σ	F	IMGT .		A GCC A		6 66C A	100 V GTA G	I ATA A
H	L TTA 1	1 :	Ŷ	55 Y TAC G		s AGT G	F TTT G	e gaa a'
1	10 S TCC 1	CDR1 S AGC .	1	I ATC T	1	F TTC A	D GAT T	120 L I CTG G2
-	s TCC T		!				1	
• •		30 S S	i	r CIG	!	75 R AGG	E GAA	K AAG
œ,	P CCA	08	E	S C G C		K AAA	S	T ACC
Ŀı	STCT	IATT	ტ	K AAA		:	95 E GAG	ტ ტ
1	O CAG	D	Σ	50 I ATT		Ф СССС ССССС	CIT	ტ ტ
! ! !	5 T ACC	OCAG	н	TACT	!	CTC C	S	115 G GGA
 	Q M CAG ATG	25 A S GCA AGT	ı	G GGA		70 G GGT	S AGC	FTTC
	D CAG	2.9 A GCA	2	D GAT		S TCT	IATC	TACG
j 	IATC	8 O	æ	PCCA		DGAT	90 T	Y
; \	1 D GAC	ng T	Ĺz,	45 E GAA	! ! !	L TTA	L CIC	P Y T F

Figure 69

TRANSLATION OF A2B5 KAPPA CHAIN

S	Q CAG	N AAC	STCT	7 C V	
I ATA T	O O CAG C	٧.	T Y TAC TO	- IMGT 110 S Y AGT TAC	
T 20 T ACC A	Y TAC C	65	G S STOTE TOTE TO	1 4	
GTC A	ľ			CDR3	
_	M W C TGG		85 T 3 ACC	Y 3 TAT	
I K K S AAG	40 Y Y TAC	:	1 GGG	O CAG	
- I E S GAG	A M	IMGT	s ICI	105 Q CAG	
ი ე		- II 60	m :	, C	
15 P CCA		CDR2	~ :	Y	
s TCT		S	80 GGG	Y	۳۵ دوم
A GCA	35	T ACA	s AGT	T ACT	K AAA
s TCT	IMGT	79 20 20	ე ე	100 PA GCC	L CTG
MATG	i .	> 55 Y TAT	S	A GCT	E GAG
I	CDR1	IATT	F	D	120 L CTG
10 A GCA 7	Y TAC	™ F	75 R CGC	E	K AAG
P	30 S AGT	, a O	A GCT	A GCT	TACC
S	V GTA	G K AAA		95 E GAG	ე ე
Q CAG	S AGT	50 CCC	P	M M D T G	SCT GCT
5 T ACC	S	I S TCC	V GTC	S	115 G GGT
r CTC	S AGC	s TCC	70 G	S	F
V GTT	25 A GCC	2 G G	s TCT	I	T ACG
1 1 Q I CAA ATT	S AGT	R CCA	A	90 T ACA	L
1 0 CAA	1 D D	Е 45 К AAG	L	LCTC	P L CCA CTC /

LYM 46 Heavy Chain Sequence:

E S G G G L GAG GTG CAG CTG GAG TCT GGG GGA GGC TTG GTC CAG CCT GGG R L S C A A S G GGG TCC CTG AGA CTC TCC TGT GCA GCC TCT GGA TTC ACC TTT AGT FR 2 V R Q A AGC TAT TGG ATG ACC TGG GTC CGC CAG GCT CCA GGG AAG GGG CTG CDR2 N I K K Ε Α D S K G GAG TGG GTG GCC AAC ATA AAG AAA GAT GGA AGT GAG AAA TCC TAT K R V G F T T S R GTG GAC TCT GTG AAG GGC CGA TTC ACC ACC TCC AGA GAC AAC GCC K S Q M S R Γ Ν L AAG AAC TCA CTG TAT CTG CAA ATG AAC AGC CTG AGA GCC GAG GAC CDR3 Y C Y A R N ACG GCT GTG TAT TAC TGT GCG AGA CCC AAT TGT GGT GGT GAC TGC W Y F D L W G R G TAT TTA CCA TGG TAC TTC GAT CTC TGG GGC CGT GGC ACC CTG GTC S V ACT GTC TCC TCA

LYM 46 KAPPA LIGHT CHAIN SEQUENCE:

) } 	N AAC	O CAG	! !	ACC	T ACT	IMGT 110 N T AT ACT
 	I ATC	Q	v 65	: : [+	TTC .	- IMO N AAT
! ! !	20 T ACC	Y		: : "	D GAT	CDR3 Y TAT
1	A GCC	M TGG		: : ∑	85 T ACA	Y TAT
! ! !	R AGG	40 A GCT		: : H	G.G.G.	CAA
; ! !	E GAG	L	IMGT -	· ·	S TCT	105 Q CAG
 	g GGC	Y	- 09	: m	· ·	, DT
	15 L	N	CDR2	: : ¤	•	Y
E	S TCT	K AAG	\ \	TCT	80 G G G	Y TAT
Ŋ	V GTG	35 N AAT	A	1	S AGC	V GTT
Σ	A GCT	MGT N AAC	×	TGG	G GGC	100 A GCA
- +	L	- TCC	55.	1	S AGT	CTG
1	10 S TCC	CDR1 S AGC	J.	ATT	F	D
Н	D GAC	Y	1	CTC	75 R CGA	E GAA
젅	P	30 L TTA	H H	- 1	D GAC	GCT
됴	STCT	V	Ü ∺	AAA	:	95 Q CAG
! ! !	Q CAG	S Q S AGC CAG AGT	- I M	CCL	CCT	CTG
1 1 1	5 T ACC	CAG	Н	CCI	V GTC C	S S
1 1 1	M ATG	S S	. 0	CAG	70 S G TCC GGG	S AGC
1 1 1	V GTG	25 S T T C C	N ش	CCA GGA C	S TCC	ATC
1 1 1		K K AAG	저 전	CCA	E G GAA I	90 T ACC
I V	1 D GAC	C	F 4 5 X	AAA	R CGG	L

PQAFFGCZTC CAG GCG CAA GGG ACC AAG GTG GAA, ATC AAA CGA ACT GTG GCT GCA CCA TCT GTC TTC

Figure 72

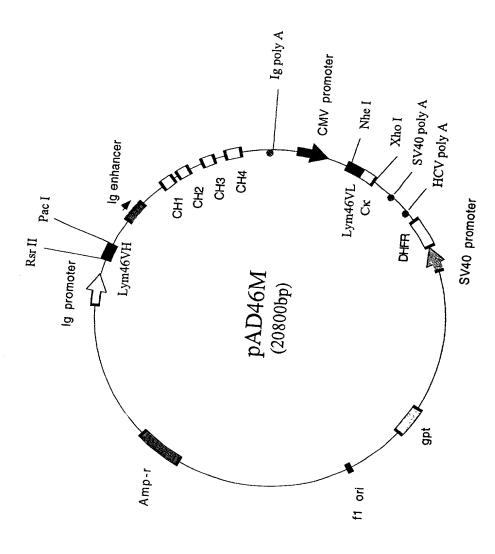


Figure 73

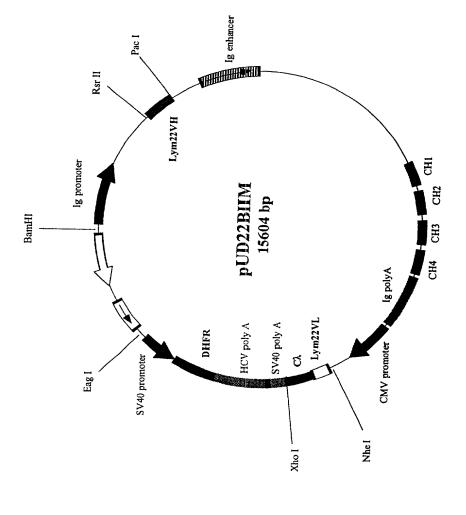


Figure 74

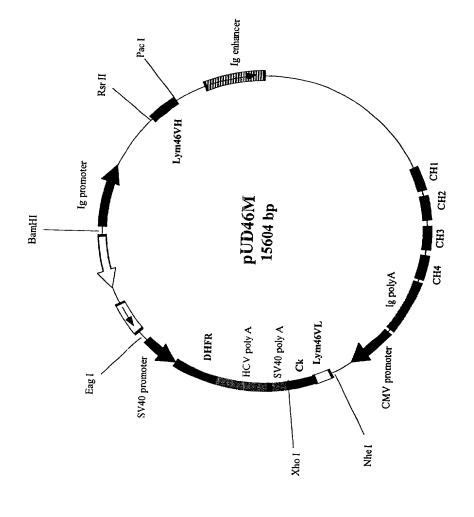


Figure 75

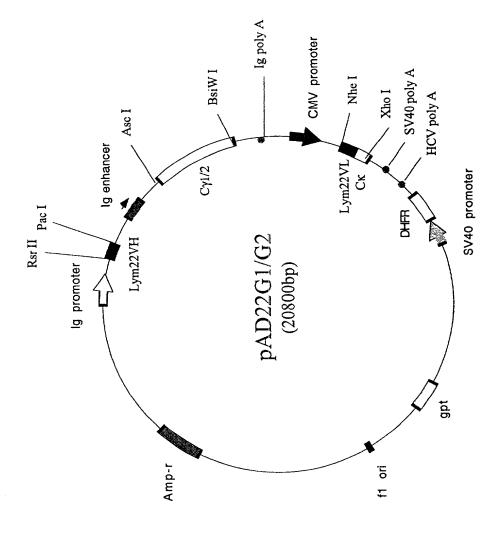


Figure 76

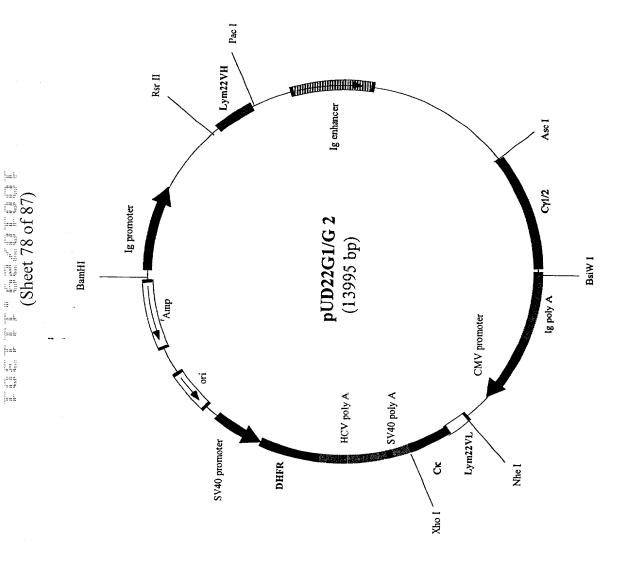


Figure 77



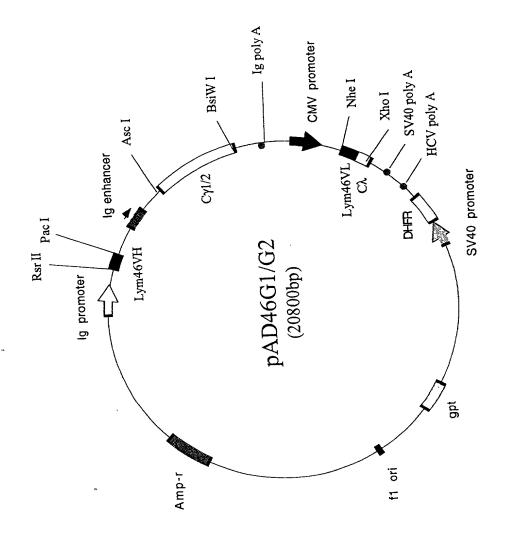


Figure 78

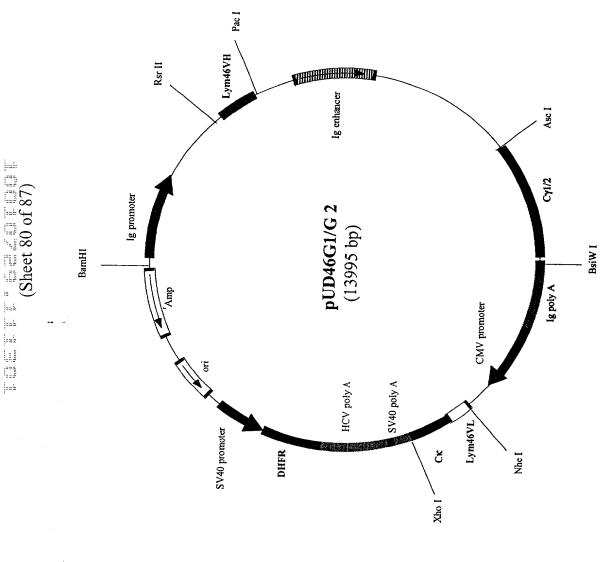
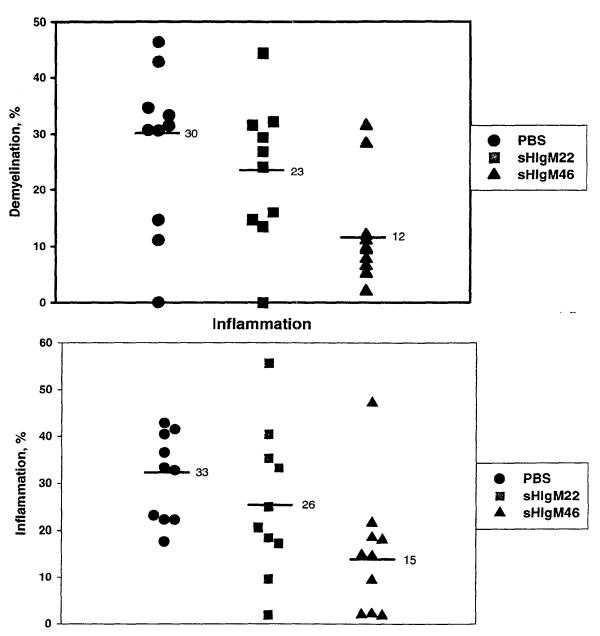


Figure 79

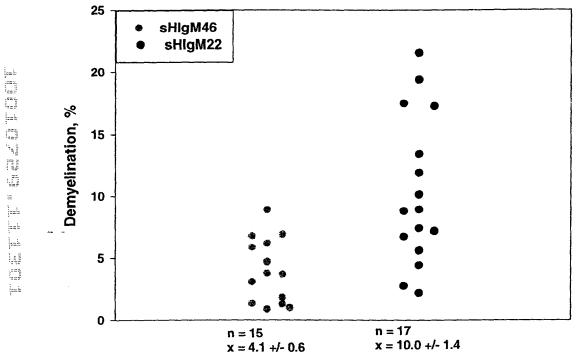
TMEV Infected SJL Mice Treated at 21 Days Post Infection





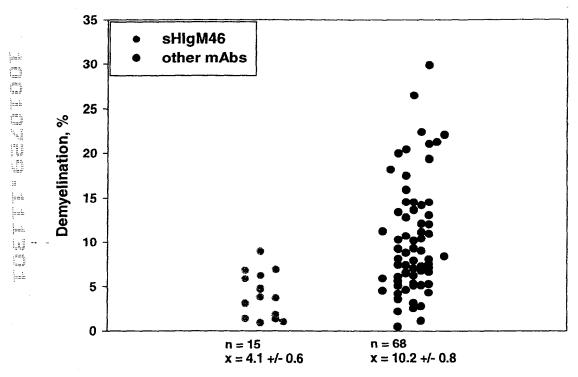
Graded by quadrant. Comparion by Chi square analysis indicates that sHIgM46 treated group is different from the sHIgM22 and PBS treated groups to a significance of p<0.001. Bars indicate means. Combined from 2 experiments.

Chronically TMEV Infected SJL Mice Treated with sHIgM46 or sHIgM22



Groups are different by ANOVA, P = 0.001

Chronically TMEV Infected SJL Mice Treated sHIgM46 vs All Other Antibodies



Groups are different by one way ANOVA, P = <0.001

Figure 82

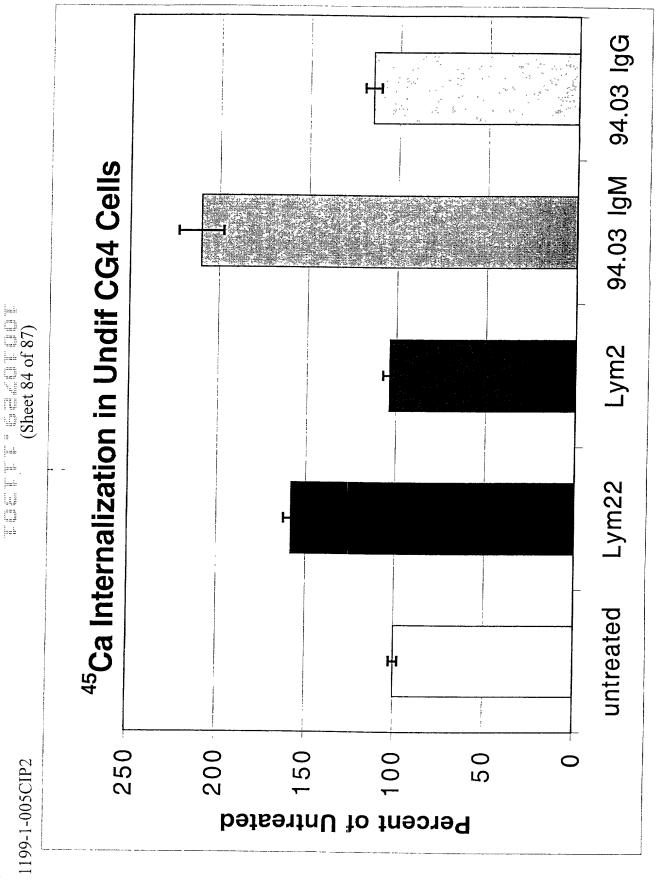


Figure 83

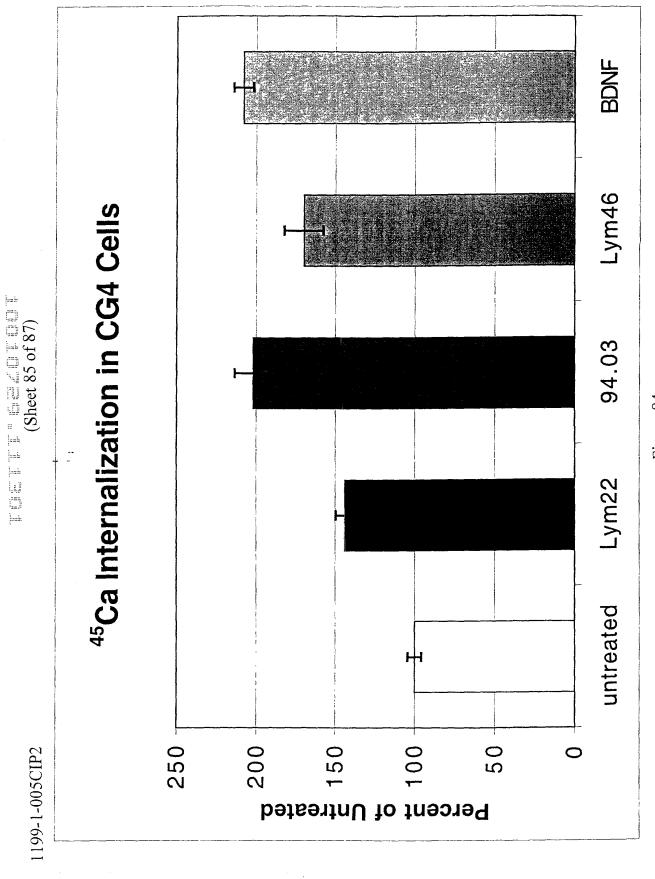


Figure 84

Figure 85

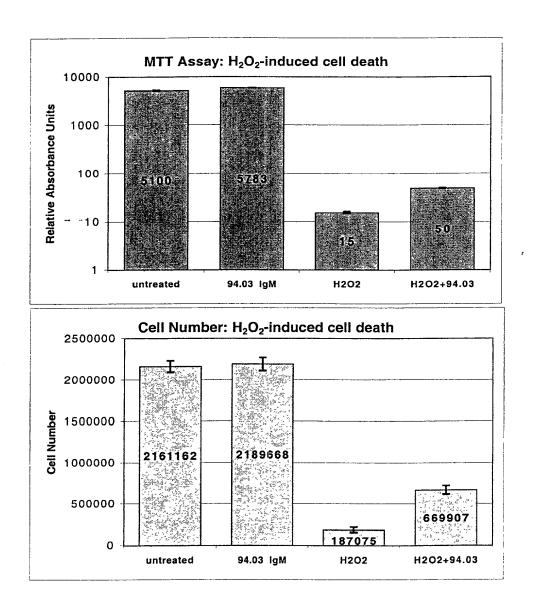


Figure 86